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```
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                                ENTRY      SESSION
FULL ESTIMATED COST          0.21          0.21
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DICTIONARY FILE UPDATES: 26 JUN 2005 HIGHEST RN 852987-17-8

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*****
```

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Experimental and calculated property data are now available. For more  
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L2 STRUCTURE UPLOADED

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=> s l1 sss full
FULL SEARCH INITIATED 12:06:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 679 TO ITERATE
```

100.0% PROCESSED 679 ITERATIONS 37 ANSWERS  
SEARCH TIME: 00.00.01

L3 37 SEA SSS FUL L1

```
=> s l2 sss full
FULL SEARCH INITIATED 12:06:36 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 146 TO ITERATE
```

100.0% PROCESSED 146 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

L4 0 SEA SSS FUL L2

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=> file caplus
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY      SESSION
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FILE 'CAPLUS' ENTERED AT 12:06:52 ON 27 JUN 2005  
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FILE LAST UPDATED: 26 Jun 2005 (20050626/ED)

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=> s l3  
L5 11 L3

=> d all 1-11

L5 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 2005:426470 CAPLUS  
DN 142:469186  
ED Entered STN: 19 May 2005  
TI Conjugated angiotensin II analogs as imaging and therapeutic agents  
IN Cuthbertson, Alan; Indrevoll, Bard; Eriksen, Morten  
PA Amersham Health A/S, Norway  
SO PCT Int. Appl., 37 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K051-08  
ICS A61K049-00; A61P009-00; A61P009-06; A61P011-00; A61P001-16;  
A61P009-10  
CC 63-5 (Pharmaceuticals)  
Section cross-reference(s): 1, 8, 34  
FAN.CNT 2

|      | PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|------|---------------|--|----------|-----------------|----------|
| PI   | WO 2005044313 | A2   | 20050519 | WO 2004-NO335   | 20041105 |
|      | W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
|      | RW:           | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| PRAI | NO 2003-4952  | A  | 20031106 |                 |          |
| GB   | 2004-16062    | A  | 20040719 |                 |          |

## CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES                                     |
|---------------|-------|--|
| WO 2005044313 | ICM   | A61K051-08   |
|               | ICS   | A61K049-00; A61P009-00; A61P009-06; A61P011-00; A61P001-16; A61P009-10 |

AB The invention comprises pharmaceuticals of formula (I) Z-(L)n-V, wherein V

denotes a peptide, L denotes an optional linker, Z denotes a group that optionally can carry an imaging moiety M, n denotes 0 or 1. The pharmaceuticals are active as therapeutic agents for the treatment of heart failure, cardiac arrhythmias and diseases where fibrosis is prominent such as COPD, liver fibrosis and atherosclerosis and are also useful as diagnostic agents for the diagnosis of heart failure and diseases where fibrosis is prominent such as COPD, liver fibrosis and atherosclerosis.

- ST angiotensin analog conjugate imaging therapeutic agent
- IT Heart, disease  
(arrhythmia; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Drug delivery systems  
(carriers; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Lung, disease  
(chronic obstructive; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Antiarrhythmics  
Atherosclerosis  
Fibrosis  
Imaging agents  
Positron-emission tomography  
Radiopharmaceuticals  
Single-photon-emission computed tomography  
Test kits  
(conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Heart, disease  
(failure; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Liver, disease  
(fibrosis; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Fibrosis  
(hepatic; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT Heart, disease  
(infarction; conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT 10043-66-0D, Iodine 131, compds., biological studies 14119-09-6D, Gallium 67, compds., biological studies 14119-15-4D, Molybdenum 99, compds., biological studies 14158-31-7D, Iodine 125, compds., biological studies 14932-42-4D, Xenon 133, compds., biological studies 15064-65-0D, Thallium 201, compds., biological studies 15715-08-9D, Iodine 123, compds., biological studies 15750-15-9D, Indium 111, compds., biological studies  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT 2321-07-5DP, Fluorescein, conjugates with angiotensin analogs  
172777-84-3DP, Cy5.5, conjugates with angiotensin analogs  
\*\*\*851542-83-1P\*\*\* 851542-84-2P 851542-86-4P 851542-87-5P  
851542-88-6P 851674-59-4P  
RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT 4474-91-3DP, analogs, conjugates  
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT 851542-85-3P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT 117548-22-8 172777-84-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(conjugates of angiotensin analogs as imaging and therapeutic agents)
- IT 14133-76-7D, Technetium 99, compds., biological studies 15678-91-8D, Krypton 81, compds., biological studies  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(metastable; conjugates of angiotensin analogs as imaging and

therapeutic agents)

L5 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:300291 CAPLUS  
 DN 142:351308  
 ED Entered STN: 07 Apr 2005  
 TI Contrast agents for optical imaging in diagnosis and follow-up of  
 treatment for colorectal cancer  
 IN Klaveness, Jo; Johannesen, Edvin; Tolleshaug, Helge  
 PA Amersham Health AS, Norway  
 SO PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K049-00  
 CC 8-9 (Radiation Biochemistry)  
 Section cross-reference(s): 1, 9, 14  
 FAN.CNT 1

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|----|--|------|----------|-----------------|----------|
| PI | WO 2005030266  | A2   | 20050407 | WO 2004-NO287   | 20040928 |
|    | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,<br>CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,<br>GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,<br>LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,<br>NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,<br>TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,<br>AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,<br>EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,<br>SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,<br>SN, TD, TG |      |          |                 |          |

PRAI NO 2003-4350 A 20030929

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| WO 2005030266 | ICM   | A61K049-00                         |
| WO 2005030266 | ECLA  | A61K049/00P4F                      |

AB The invention provides contrast agents for optical imaging of colorectal cancer (CRC) in patients. The contrast agents may be used in diagnosis of CRC, for follow up of progress in disease development, and for follow up of treatment of CRC. Further, the invention provides methods for optical imaging of CRC in patients. Synthesis of contrast agents is described.

ST synthesis contrast agent optical imaging diagnosis colorectal cancer prognosis

IT Cholecystokinin receptors  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (CCKB, contrast agents for detection of; contrast agents for optical imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT Cadherins  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (E-, contrast agents for detection of; contrast agents for optical imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT Cadherins  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (P-, contrast agents for detection of; contrast agents for optical imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT Diagnosis  
 (cancer; contrast agents for optical imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT Intestine, neoplasm  
 (colorectal; contrast agents for optical imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT APC protein  
 Epidermal growth factor receptors  
 Hepatocyte growth factor receptors  
 Mucins  
 Proliferating cell nuclear antigen

Urokinase-type plasminogen activator receptors  
 Vascular endothelial growth factor receptors  
 neu (receptor)  
 p53 (protein)  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL  
 (Biological study); USES (Uses)  
 (contrast agents for detection of; contrast agents for optical imaging  
 in diagnosis and follow-up of treatment for colorectal cancer)

IT Antitumor agents  
 Human  
 Imaging  
 Prognosis  
 (contrast agents for optical imaging in diagnosis and follow-up of  
 treatment for colorectal cancer)

IT Lipids, biological studies  
 Oligonucleotides  
 Oligosaccharides, biological studies  
 Peptides, biological studies  
 RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical  
 study); BIOL (Biological study); USES (Uses)  
 (contrast agents for optical imaging in diagnosis and follow-up of  
 treatment for colorectal cancer)

IT Ras proteins  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL  
 (Biological study); USES (Uses)  
 (k-ras, contrast agents for detection of; contrast agents for optical  
 imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT Molecules  
 (small, drug-like; contrast agents for optical imaging in diagnosis and  
 follow-up of treatment for colorectal cancer)

IT Catenins  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL  
 (Biological study); USES (Uses)  
 (.beta.-, contrast agents for detection of; contrast agents for optical  
 imaging in diagnosis and follow-up of treatment for colorectal cancer)

IT 9031-44-1, Kinase 9031-61-2, Thymidylate synthase 9047-22-7, Cathepsin  
 B 141907-41-7, Matrix metalloproteinase 329900-75-6, Cox2  
 RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL  
 (Biological study); USES (Uses)  
 (contrast agents for detection of; contrast agents for optical imaging  
 in diagnosis and follow-up of treatment for colorectal cancer)

IT 848830-26-2P, Num 134  
 RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological  
 study); PREP (Preparation); USES (Uses)  
 (contrast agents for optical imaging in diagnosis and follow-up of  
 treatment for colorectal cancer)

IT 112-60-7, Tetraethylene glycol 26386-88-9, Diphenylphosphoryl azide  
 26628-22-8, Sodium azide 114798-26-4, Losartan 172777-84-3  
 220554-08-5, CP 471358  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (contrast agents for optical imaging in diagnosis and follow-up of  
 treatment for colorectal cancer)

IT 101187-39-7P, 1,11-Diazido-3,6,9-trioxaundecane 134179-38-7P,  
 11-Azido-3,6,9-trioxaundecanamine 141949-89-5P, Num 120 161552-03-0P  
 727718-93-6P, Num 119 848830-21-7P \*\*\*848830-22-8P\*\*\*  
 848830-23-9P, Num 121 848830-24-0P, Num 132 848830-25-1P, Num 133  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (contrast agents for optical imaging in diagnosis and follow-up of  
 treatment for colorectal cancer)

IT 849068-84-4 849068-86-6  
 RL: PRP (Properties)  
 (unclaimed sequence; contrast agents for optical imaging in diagnosis  
 and follow-up of treatment for colorectal cancer)

L5 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:182691 CAPLUS

DN 142:285150

ED Entered STN: 04 Mar 2005

TI Cyclic peptide and imaging compound compositions and uses for targeted  
 imaging and therapy

IN Li, Chun; Ke, Shi; Wang, Wei  
 PA Board of Regents, the University of Texas System, USA  
 SO PCT Int. Appl., 92 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07K007-64  
 ICS A61K051-08  
 CC 63-5 (Pharmaceuticals)  
 Section cross-reference(s): 8  
 FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | WO 2005019247   | A2   | 20050303 | WO 2004-US26220 | 20040813 |
|      | WO 2005019247   | A3   | 20050519 |                 |          |
|      | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |      |          |                 |          |
|      | US 2005069494   | A1   | 20050331 | US 2004-918009  | 20040813 |
| PRAI | US 2003-495658P   | P    | 20030815 |                 |          |
|      | US 2004-918009  | A    | 20040813 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES    |
|---------------|-------|---------------------------------------|
| WO 2005019247 | ICM   | C07K007-64                            |
|               | ICS   | A61K051-08                            |
| US 2005069494 | NCL   | 424/001.690; 530/317.000; 514/009.000 |

OS MARPAT 142:285150

AB The present invention relates to novel cyclic peptides that may be conjugated with imaging agents, including novel imaging agents. Specifically, it includes c(KRGDf) NIR imaging compns. and novel cyclic HWGFTL polypeptides which may be used inter alia in NIR, MRI and nuclear imaging as well as therapy. Addnl., the invention includes novel imaging agents, such as TS-ICG derivs. The invention also relates to methods of making and using such compds. Such uses include both pre-operative and intraoperative detection of tumor cells and treatment monitoring.

ST peptide imaging agent drug conjugate metalloproteinase targeted

IT Imaging agents

(NMR contrast; cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT Meningitis

(bacterial; cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT Drug delivery systems

(carriers; cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT Cyanine dyes

Fluorescent indicators

Heart, disease

Human

Imaging agents

Infection

Mammary gland, neoplasm

Melanoma

Neoplasm

Osteoarthritis

Periodontium, disease

Respiratory tract, disease

Rheumatoid arthritis

(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT Polyoxyalkylenes, biological studies

Radionuclides, biological studies

RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT Peptides, biological studies  
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cyclic; cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT Imaging  
(fluorescent; cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT 141907-41-7 146480-35-5, Matrix metalloproteinase 2  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT 1317-61-9D, Iron oxide, peptide-conjugated compds. 1332-37-2D, Iron oxide, peptide-conjugated compds. 7439-96-5D, Manganese, peptide-conjugated compds. 7440-54-2D, Gadolinium, peptide-conjugated compds. 13981-25-4D, Copper 64, peptide-conjugated compds., biological studies 13981-56-1D, Fluorine 18, peptide-conjugated compds., biological studies 14133-76-7D, Technetium 99, peptide-conjugated compds., biological studies 15750-15-9D, Indium 111, peptide-conjugated compds., biological studies 15757-14-9D, Gallium 68, peptide-conjugated compds., biological studies 15757-86-5D, Copper 67, peptide-conjugated compds., biological studies 181786-27-6D, conjugates with IRdye 800 211380-08-4D, IRdye 800, conjugates with a cyclic peptide  
\*\*\*847180-59-0\*\*\* \*\*\*847180-60-3\*\*\*  
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT \*\*\*847180-57-8P\*\*\*  
RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT \*\*\*847180-46-5P\*\*\* 847180-47-6P  
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT 56-87-1D, L-Lysine, conjugates 70-51-9D, Deferoxamine, Conjugates with MTX and a cyclic peptide 3599-32-4D, conjugates 3599-32-4D, Indocyanine green, peptide conjugates 3599-32-4D, Indocyanine green, sulfonated derivs., peptide conjugates 10043-66-0D, Iodine 131, peptide conjugates labeled with, biological studies 14158-30-6D, Iodine 124, peptide conjugates labeled with, biological studies 14158-31-7D, Iodine 125, peptide conjugates labeled with, biological studies 25322-68-3D, Peg, peptide-conjugates 25513-46-6D, L-Glutamic acid polymer, peptide-conjugates 172777-84-3D, Cy5.5, peptide conjugates 211380-08-4, IRDye 800 211380-08-4D, IRDye800, peptide conjugates 244082-19-7D, conjugates 791772-43-5 847180-39-6D, conjugates 847180-40-9D, conjugates 847180-41-0D, conjugates 847180-42-1D, conjugates 847180-43-2D, conjugates 847180-44-3D, conjugates 847180-45-4D, conjugates 847180-48-7D, conjugates 847180-49-8D, conjugates 847180-50-1D, conjugates 847180-51-2D, conjugates 847180-52-3 847180-52-3D, Conjugates with Deferoxamine 847180-53-4 847180-54-5 847227-29-6  
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT 181786-27-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclic peptide and imaging compd. compns. and uses for targeted imaging and therapy)

IT 59-05-2D, Methotrexate, peptide-conjugated compds. 7689-03-4D, Camptothecin, peptide-conjugated compds. 10098-91-6D, Yttrium 90, peptide-conjugated compds., biological studies 23214-92-8D, Doxorubicin, peptide-conjugated compds. 33069-62-4D, Paclitaxel, peptide-conjugated compds.



RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cyclic peptide and imaging compd. compns. and uses for targeted  
imaging and therapy)

L5 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:913618 CAPLUS

DN 142:109507

ED Entered STN: 01 Nov 2004

TI In vivo Near-Infrared Fluorescence Imaging of Integrin .alpha.v.beta.3 in  
Brain Tumor Xenografts

AU Chen, Xiaoyuan; Conti, Peter S.; Moats, Rex A.

CS PET Imaging Science Center, University of Southern California Keck School  
of Medicine, Los Angeles, CA, USA

SO Cancer Research (2004), 64(21), 8009-8014

CODEN: CNREA8; ISSN: 0008-5472

PB American Association for Cancer Research

DT Journal

LA English

CC 8-9 (Radiation Biochemistry)

AB Noninvasive visualization of cell adhesion mol. .alpha.v.beta.3 integrin  
expression in vivo has been well studied by using the radionuclide imaging  
modalities in various preclin. tumor models. A literature survey  
indicated no previous use of cyanine dyes as contrast agents for in vivo  
optical detection of tumor integrin. Herein, we report the integrin  
receptor specificity of novel peptide-dye conjugate arginine-glycine-  
aspartic acid (RGD)-Cy5.5 as a contrast agent in vitro, in vivo, and ex  
vivo. The RGD-Cy5.5 exhibited intermediate affinity for .alpha.v.beta.3  
integrin (IC50 = 58.1 +/- 5.6 nmol/L). The conjugate led to elevated  
cell-assocd. fluorescence on integrin-expressing tumor cells and  
endothelial cells and produced minimal cell fluorescence when coincubated  
with c(RGDyK). In vivo imaging with a prototype three-dimensional  
small-animal imaging system visualized s.c. U87MG glioblastoma xenograft  
with a broad range of concns. of fluorescent probe administered via the  
tail vein. The intermediate dose (0.5 nmol) produces better tumor  
contrast than high dose (3 nmol) and low dose (0.1 nmol) during 30 min to  
24 h postinjection, because of partial self-inhibition of  
receptor-specific tumor uptake at high dose and the presence of  
significant amt. of background fluorescence at low dose, resp. The tumor  
contrast was also dependent on the mouse viewing angles. Tumor uptake of  
RGD-Cy5.5 was blocked by unlabeled c(RGDyK). This study suggests that the  
combination of the specificity of RGD peptide/integrin interaction with  
near-IR fluorescence detection may be applied to noninvasive imaging of  
integrin expression and monitoring anti-integrin treatment efficacy  
providing near real-time measurements.

ST nearIR fluorescence imaging agent RGD conjugate integrin brain tumor

IT Fluorescence

(IR; near-IR fluorescence imaging of integrin .alpha.v.beta.3 in brain  
tumor)

IT Imaging agents

(contrast; near-IR fluorescence imaging of integrin .alpha.v.beta.3 in  
brain tumor)

IT Neuroglia, neoplasm

(glioblastoma; near-IR fluorescence imaging of integrin .alpha.v.beta.3  
in brain tumor)

IT Fluorescent indicators

Human

(near-IR fluorescence imaging of integrin .alpha.v.beta.3 in brain  
tumor)

IT Imaging

(tumor; near-IR fluorescence imaging of integrin .alpha.v.beta.3 in  
brain tumor)

IT Integrins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(.alpha.v.beta.3; near-IR fluorescence imaging of integrin

.alpha.v.beta.3 in brain tumor)

IT \*\*\*820967-21-3\*\*\* , RGD-Cy 5.5

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)

(near-IR fluorescence imaging of integrin .alpha.v.beta.3 in brain  
tumor)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- (19) Janssen, M; Cancer Biother Radiopharm 2002, V17, P641 CAPLUS
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- (36) Zaheer, A; Nat Biotechnol 2001, V19, P1148 CAPLUS

L5 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:775925 . CAPLUS

DN 141:421859

ED Entered STN: 24 Sep 2004

TI Developing a peptide-based near-infrared molecular probe for protease sensing

AU Pham, Wellington; Choi, Yongdoo; Weissleder, Ralph; Tung, Ching-Hsuan

CS Center for Molecular Imaging Research, Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, 02129, USA

SO Bioconjugate Chemistry (2004), 15(6), 1403-1407

CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 9-5 (Biochemical Methods)

AB Recently near-IR (NIR) mol. probes have become important reporter mols. for a no. of types of in vivo biomedical imaging. A peptide-based NIR fluorescence probe consisting of a NIR fluorescence emitter (Cy5.5), a NIR fluorescence absorber (NIRQ820), and a protease selective peptide sequence was designed to sense protease activity. Using a MMP-7 model, we showed that NIRQ820 efficiently absorbs the emission energy of Cy5.5 resulting in a low initial signal. Upon reacting with its target, MMP-7, the fluorescence signal of the designed probe was increased by 7-fold with a  $K_{cat}/K_m$  of 100 000 M<sup>-1</sup> s<sup>-1</sup>. The described synthetic strategy should have wide application for other NIR probe preps.

ST development peptide near IR mol probe protease sensing

IT IR spectroscopy

(near-IR; peptide-based near-IR mol. probe for protease sensing)

IT 141256-52-2, Matrix metalloproteinase-7

RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)

(peptide-based near-IR mol. probe for protease sensing)

IT \*\*\*795315-58-1P\*\*\* \*\*\*795315-59-2P\*\*\*

RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)  
 (peptide-based near-IR mol. probe for protease sensing)  
 IT 172777-84-3, Cy5.5 612531-93-8 795315-55-8D, conjugates with resin  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (peptide-based near-IR mol. probe for protease sensing)  
 IT 795315-56-9DP, conjugates with resin 795315-57-0DP, conjugates with resin  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (peptide-based near-IR mol. probe for protease sensing)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (2) Bremer, C; Nat Med 2001, V7, P743 CAPLUS
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- (11) Liu, Y; Anal Biochem 1999, V267, P331 CAPLUS
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- (15) Pham, W; Angew Chem, Int Ed 2002, V41, P3659 CAPLUS
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- (22) Weissleder, R; Nat Med 2003, V9, P123 CAPLUS
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L5 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:251965 CAPLUS

DN 140:292622

ED Entered STN: 26 Mar 2004

TI Systems and methods for high-resolution in vivo imaging of biochemical activity in a living organism

IN Hancu, Ileana; Amaratunga, Mohan Mark; Wicht, Denyce Kramer; Dhawale, Paritosh; Ishaque, Nadeem; Syud, Faisal Ahmed; Johnson, Bruce Fletcher; Williams, Amy Casey

PA USA

SO U.S. Pat. Appl. Publ., 29 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61B005-055

INCL 424009300; 424009600

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 8, 9, 34

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO.  | DATE     |  |
|------|----------------|------|----------|--|----------|--|
| PI   | US 2004057903  | A1   | 20040325 | US 2002-252311   | 20020923 |  |
|      | WO 2004026344  | A1   | 20040401 | WO 2003-US25184  | 20030811 |  |
|      | W:             |      |          | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW |          |  |
|      | RW:            |      |          | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |  |
| PRAI | US 2002-252311 | A    | 20020923 |  |          |  |

## CLASS

| PATENT NO.    | CLASS  | PATENT FAMILY CLASSIFICATION CODES     |
|---------------|--|--|
| US 2004057903 | ICM  | A61B005-055                            |
|               | INCL   | 424009300; 424009600                   |
| US 2004057903 | NCL  | 424/009.300; 424/009.600               |
|               | ECLA   | A61K049/00F; A61K049/00P4F; A61K049/10 |
| WO 2004026344 | ECLA   | A61K049/00F; A61K049/00P4F; A61K049/10 |
| AB            | This invention relates to bifunctional detection agents useful for providing high-resoln., in vivo imaging of biochem. activity in a living organism. Methods of using these bifunctional detection agents may comprise administering them into a living organism, and then estg. the localization of the detection agent using one modality (i.e., MRI), while concurrently estg. the level of biol. activity using a second modality (i.e., optical imaging). One of the bifunctional detection agents comprises a magnetic resonance component and an optical imaging component. The magnetic resonance component comprises a contrast agent that is always activated or "on". The optical imaging component comprises an activatable contrast agent or dye that is activated or turned "on" only in the presence of a particular event. For example, the optical imaging component may be activated by a certain wavelength of light and (1) by the presence of a particular biochem. marker, (2) by enzyme cleavage, or (3) by a change in the temp. or pH of the surrounding medium. These bifunctional detection agents allow both anatomical and functional/metabolic information to be obtained simultaneously. |  |
| ST            | bifunctional detection agent MRI optical imaging; gadolinium complex dye   |  |
| IT            | bifunctional metab imaging agent   |  |
| IT            | Imaging agents<br>(NMR contrast; bifunctional detection agents comprises magnetic resonance and optical imaging components)  |  |
| IT            | Dyes<br>Imaging agents<br>Light sensitization<br>Positron-emission tomography<br>Tomography<br>(bifunctional detection agents comprises magnetic resonance and optical imaging components)   |  |
| IT            | Enzymes, uses<br>RL: CAT (Catalyst use); USES (Uses)<br>(bifunctional detection agents comprises magnetic resonance and optical imaging components)  |  |
| IT            | Drug delivery systems<br>(carriers; bifunctional detection agents comprises magnetic resonance and optical imaging components)   |  |
| IT            | Imaging<br>(fluorescent; bifunctional detection agents comprises magnetic resonance and optical imaging components)  |  |
| IT            | Drug delivery systems<br>(injections; bifunctional detection agents comprises magnetic resonance and optical imaging components)   |  |
| IT            | Drug delivery systems<br>(nanoparticles; bifunctional detection agents comprises magnetic resonance and optical imaging components)  |  |
| IT            | Drug delivery systems<br>(oral; bifunctional detection agents comprises magnetic resonance and optical imaging components)   |  |
| IT            | 7429-91-6D, Dysprosium, conjugated complexes 7439-94-3D, Lutetium, conjugated complexes 7439-96-5D, Manganese, conjugated complexes 7440-00-8D, Neodymium, conjugated complexes 7440-10-0D, Praseodymium, conjugated complexes 7440-19-9D, Samarium, conjugated complexes 7440-27-9D, Terbium, conjugated complexes 7440-30-4D, Thulium, conjugated complexes 7440-52-0D, Erbium, conjugated complexes 7440-53-1D, Europium, conjugated complexes 7440-60-0D, Holmium, conjugated complexes 7440-64-4D, Ytterbium, conjugated complexes<br>RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)<br>(bifunctional detection agents comprises magnetic resonance and optical imaging components)   |  |
| IT            | 7440-54-2DP, Gadolinium, conjugated complexes ***674799-57-6P***<br>***675150-06-8P*** ***675150-08-0P*** 675150-10-4P<br>RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  |  |

(bifunctional detection agents comprises magnetic resonance and optical imaging components)

IT 124266-37-1 167219-97-8 442912-55-2 674799-38-3D, resin-bound  
 674799-47-4 674799-58-7D, resin-bound 674799-66-7D, resin-bound  
 674799-68-9

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (bifunctional detection agents comprises magnetic resonance and optical imaging components)

IT 674799-40-7DP, resin-bound \*\*\*674799-43-0DP\*\*\* , resin-bound  
 \*\*\*674799-46-3DP\*\*\* , resin-bound \*\*\*674799-49-6DP\*\*\* , resin-bound  
 \*\*\*674799-51-0P\*\*\* \*\*\*674799-53-2P\*\*\* \*\*\*674799-55-4P\*\*\*  
 674799-59-8DP, resin-bound 674799-60-1DP, resin-bound 674799-61-2DP,  
 resin-bound \*\*\*674799-62-3DP\*\*\* , resin-bound \*\*\*674799-63-4P\*\*\*  
 \*\*\*674799-65-6P\*\*\* 674799-67-8DP, resin-bound 674799-69-0DP,  
 resin-bound 674799-70-3DP, resin-bound 674799-71-4DP, resin-bound  
 674799-72-5P 674799-74-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (bifunctional detection agents comprises magnetic resonance and optical imaging components)

IT 7439-89-6, Iron, biological studies

RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
 (nanoparticles; bifunctional detection agents comprises magnetic resonance and optical imaging components)

L5 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:757959 CAPLUS

DN 139:257385

ED Entered STN: 26 Sep 2003

TI Optical imaging probes

IN Poss, Kirtland G.; Madden, Karen N.; Jones, Ella; Kossodo, Sylvie

PA Visen Medical, Inc., USA

SO PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-533  
 ICS A61K049-00; A61B005-00

CC 8-9 (Radiation Biochemistry)  
 Section cross-reference(s): 1, 63

FAN.CNT 1

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2003079015  | A1   | 20030925 | WO 2003-US7579  | 20030311 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG<br>EP 1485716 A1 20041215 EP 2003-744653 20030311<br>R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK<br>PRAI US 2002-363499P P 20020311<br>WO 2003-US7579 W 20030311 |      |          |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES                    |
|---------------|-------|---|
| WO 2003079015 | ICM   | G01N033-533   |
|               | ICS   | A61K049-00; A61B005-00                                |
| WO 2003079015 | ECLA  | A61K047/48H4; A61K049/00P4F; G01N033/533; G01N033/58D |

AB This invention relates to optical imaging probes and the use of such probes for diagnosing and monitoring disease, and disease treatment. The optical imaging probes of the current invention can be used to identify and characterize normal and diseased tissues with regards to altered metabolic activity.

ST optical imaging probe

IT Imaging  
(NMR; optical imaging probes)  
IT Diagnosis  
Human  
Tomography  
(optical imaging probes)  
IT \*\*\*603953-43-1P\*\*\* 603953-44-2P  
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(optical imaging probes)  
IT 151134-79-1, NIR1 169799-14-8, Cy7 172777-84-3, Cy5.5 422309-67-9, Alexa Fluor 680  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(optical imaging probes)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Canon Kk; EP 0601606 A 1994 CAPLUS
- (2) Diatron Corp; WO 9118006 A 1991 CAPLUS
- (3) Lee, J; US 6083486 A 2000 CAPLUS
- (4) Univ California; WO 0063418 A 2000 CAPLUS
- (5) Univ Utah Res Found; WO 02074171 A 2002
- (6) Zaheer, A; NATURE BIOTECHNOLOGY 2001, V19(12), P1148 CAPLUS

L5 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:376654 CAPLUS

DN 138:390922

ED Entered STN: 16 May 2003

TI Arsenide compound system for selective targeting of apoptotic cells

IN Hogg, Philip John

PA Unisearch Limited, Australia

SO PCT Int. Appl., 85 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K033-36

ICS A61K047-04; A61P035-00; A61P019-00; A61P009-10

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 8, 9, 29

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | WO 2003039564   | A1   | 20030515 | WO 2002-AU1523  | 20021108 |
|      | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
|      | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
|      | CA 2466303  | AA   | 20030515 | CA 2002-2466303 | 20021108 |
|      | EP 1453525  | A1   | 20040908 | EP 2002-774165  | 20021108 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK   |      |          |                 |          |
|      | JP 2005511598   | T2   | 20050428 | JP 2003-541855  | 20021108 |
|      | US 2005101524   | A1   | 20050512 | US 2003-494822  | 20021108 |
| PRAI | AU 2001-8746  | A    | 20011108 |                 |          |
|      | WO 2002-AU1523  | W    | 20021108 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES  |
|---------------|-------|---|
| WO 2003039564 | ICM   | A61K033-36  |
|               | ICS   | A61K047-04; A61P035-00; A61P019-00; A61P009-10  |
| WO 2003039564 | ECLA  | A61K009/00M16; A61K009/00M20B; A61K009/48H4; A61K033/36; A61K047/00R; A61K047/44; A61K047/48T8M4  |
| JP 2005511598 | FTERM | 4C084/AA02; 4C084/AA06; 4C084/AA07; 4C084/BA01; 4C084/BA08; 4C084/BA15; 4C084/BA32; 4C084/BA33; 4C084/CA59; 4C084/MA01; 4C084/NA14; 4C084/NA15; |

4C084/ZA012; 4C084/ZA362; 4C084/ZA392; 4C084/ZA402;  
4C084/ZA542; 4C084/ZA962; 4C084/ZB072; 4C084/ZB112;  
4C084/ZB212; 4C084/ZB262; 4C085/HH03; 4C085/HH07;  
4C085/JJ05; 4C085/KA09; 4C085/KA29; 4C085/KA30;  
4C085/KB07; 4C085/KB09; 4C085/KB11; 4C085/KB18;  
4C085/KB20; 4C085/KB82; 4C085/LL01; 4C085/LL07;  
4C085/LL18

US 2005101524 NCL 514/006.000; 424/622.000  
OS MARPAT 138:390922  
AB The invention discloses a method of selectively targeting an active agent (or agent capable of becoming an active agent) to apoptotic cells in a vertebrate, comprising administering to the vertebrate a system comprising an arsenoxide (or arsenoxide equiv.) compd. and the agent, wherein the system selectively targets apoptotic cells. Prepn. of e.g. 4-[N-(S-glutathionylacetyl)amino]phenylarsenoxide is described.  
ST apoptotic cell targeting arsenide compd system prepn  
IT Toxins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(A chain; arsenide compd. system for selective targeting of apoptotic cell)  
IT Animal cell line  
(BxPC-3; arsenide compd. system for selective targeting of apoptotic cell)  
IT Animal cell line  
(HT-1080; arsenide compd. system for selective targeting of apoptotic cell)  
IT Lung, neoplasm  
(Lewis lung tumor; arsenide compd. system for selective targeting of apoptotic cell)  
IT Proteins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(RIP (ribosome-inactivating protein); arsenide compd. system for selective targeting of apoptotic cell)  
IT Diagnosis  
(agents; arsenide compd. system for selective targeting of apoptotic cell)  
IT Sulfonic acids, biological studies  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(alkanesulfonic, alkylsulfonates; arsenide compd. system for selective targeting of apoptotic cell)  
IT Hormones, animal, biological studies  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(and hormone antagonists; arsenide compd. system for selective targeting of apoptotic cell)  
IT Angiogenesis  
(angiogenesis-dependent disease; arsenide compd. system for selective targeting of apoptotic cell)  
IT Antitumor agents  
(antibiotic; arsenide compd. system for selective targeting of apoptotic cell)  
IT Antibiotics  
(antitumor; arsenide compd. system for selective targeting of apoptotic cell)  
IT Alkylating agents, biological  
Angiogenesis inhibitors  
Anti-inflammatory agents  
Anti-ischemic agents  
Anticoagulants  
Antitumor agents  
Apoptosis  
Autoimmune disease  
Blood vessel, disease  
Cardiovascular agents  
Chemiluminescent substances  
Chemotherapy  
Cytotoxic agents  
Drug targets

Fluorescent dyes  
 Fluorescent substances  
 Human  
 Imaging agents  
 Inflammation  
 Ischemia  
 Myelodysplastic syndromes  
 Neoplasm  
 Nervous system agents  
 Paramagnetic materials  
 Prostate gland, neoplasm  
 Test kits  
 Therapy  
 Thrombosis  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT Thioredoxins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT Antibodies and Immunoglobulins  
 Avidins  
 Blood-coagulation factors  
 Cytokines  
 Growth factors, animal  
 Radionuclides, biological studies  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT Anthracyclines  
 Ricins  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
 (capsules; arsenide compd. system for selective targeting of apoptotic cell)

IT Pancreas, neoplasm  
 (carcinoma, BxPC-3 cell; arsenide compd. system for selective targeting of apoptotic cell)

IT Antigens  
 Enzymes, biological studies  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (conjugates, with arsenoxide compds.; arsenide compd. system for selective targeting of apoptotic cell)

IT Amines, biological studies  
 Amino acids, biological studies  
 Oligosaccharides, biological studies  
 Peptides, biological studies  
 Proteins  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (conjugates; arsenide compd. system for selective targeting of apoptotic cell)

IT Toxins  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (cytotoxins; arsenide compd. system for selective targeting of apoptotic cell)

IT Nervous system, disease  
 (degeneration; arsenide compd. system for selective targeting of apoptotic cell)

IT Toxins  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (diphtheria; arsenide compd. system for selective targeting of apoptotic cell)

IT Blood vessel  
 (endothelium; arsenide compd. system for selective targeting of apoptotic cell)

IT Pseudomonas  
 (endotoxin; arsenide compd. system for selective targeting of apoptotic cell)



cell)

IT Embryophyta  
Eubacteria  
Fungi  
(endotoxins; arsenide compd. system for selective targeting of apoptotic cell)

IT Toxins  
RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(endotoxins; arsenide compd. system for selective targeting of apoptotic cell)

IT Sarcoma  
(fibrosarcoma, HT1080 cell; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(inhalants; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(injections; arsenide compd. system for selective targeting of apoptotic cell)

IT Reperfusion  
(injury; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(liposomes; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(lotions; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(ointments, creams; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(ointments; arsenide compd. system for selective targeting of apoptotic cell)

IT Carcinoma  
(pancreatic, BxPC-3 cell; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(parenterals; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(prodrugs; arsenide compd. system for selective targeting of apoptotic cell)

IT Disease, animal  
(proliferative; arsenide compd. system for selective targeting of apoptotic cell)

IT Injury  
(reperfusion; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(solns., ophthalmic; arsenide compd. system for selective targeting of apoptotic cell)

IT Drug delivery systems  
(topical; arsenide compd. system for selective targeting of apoptotic cell)

IT Endothelium  
(vascular; arsenide compd. system for selective targeting of apoptotic cell)

IT Imaging agents  
(x-ray, contrast; arsenide compd. system for selective targeting of apoptotic cell)

IT Interferons  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(.alpha.; arsenide compd. system for selective targeting of apoptotic cell)

IT 37318-49-3, Protein disulfide isomerase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(arsenide compd. system for selective targeting of apoptotic cell)

IT 9035-58-9DP, Blood-coagulation factor III, extracellular domain, biocytin

deriv.-labeled 102849-12-7DP, reaction products with tissue factor extracellular domain  
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT 117-42-0 2321-07-5, Fluorescein 14280-50-3, biological studies 14701-22-5, Nickel II, biological studies 14913-52-1, Neodymium 3+, biological studies 15158-11-9, Copper II, biological studies 15438-31-0, biological studies 16065-83-1, Chromium III, biological studies 16065-91-1, Gold III, biological studies 16096-89-2, Lanthanum III, biological studies 16397-91-4, Manganese II, biological studies 18472-30-5, Erbium 3+, biological studies 20074-52-6, biological studies 22537-40-2, Yttrium 3+, biological studies 22541-17-9, Samarium 3+, biological studies 22541-19-1, Gadolinium III, biological studies 22541-21-5, Dysprosium 3+, biological studies 22541-22-6, Holmium 3+, biological studies 23713-46-4, Bismuth 3+, biological studies 525549-70-6  
 RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT 331722-70-4P  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT 56-84-8D, L-Aspartic acid, conjugates 56-86-0D, L-Glutamic acid, conjugates 56-87-1D, L-Lysine, conjugates 58-85-5D, Biotin, conjugates with arsenoxide compds. 59-05-2D, Methotrexate, conjugates with arsenoxide compds. 70-18-8D, Glutathione, conjugates 74-79-3D, L-Arginine, conjugates 498-40-8D, Cysteic acid, conjugates 3416-24-8D, Glucosamine, conjugates 7440-38-2D, Arsenic, arsenoso group-contg. compds. 7553-56-2, Iodine, biological studies 8001-27-2D, Hirudin, conjugates with arsenoxide compds. 9002-03-3, Dihydrofolate reductase 9002-04-4, Thrombin 9013-20-1, Streptavidin 10028-17-8, Tritium, biological studies 13967-65-2, Holmium-166, biological studies 13981-22-1, Nitrogen-13, biological studies 13981-56-1, Fluorine-18, biological studies 13982-43-9, Oxygen-15, biological studies 14119-09-6, Gallium-67, biological studies 14158-31-7, Iodine-125, biological studies 14265-75-9, Lutetium-177, biological studies 14333-33-6, Carbon-11, biological studies 14378-26-8, Rhenium-188, biological studies 14596-37-3, Phosphorus-32, biological studies 14762-75-5, Carbon-14, biological studies 14913-89-4, biological studies 14998-63-1, Rhenium-186, biological studies 15117-53-0, Sulfur-35, biological studies 15749-66-3, Phosphorus-33, biological studies 15750-15-9, Indium-111, biological studies 15757-86-5, Copper-67, biological studies 15766-00-4, Samarium-153, biological studies 19246-18-5D, Cysteinylglycine, conjugates  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT 172777-84-3, Cy5.5  
 RL: DGN (Diagnostic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT 331722-78-2P 331722-79-3P \*\*\*331722-80-6P\*\*\* \*\*\*525549-67-1P\*\*\* 525549-69-3P  
 RL: DGN (Diagnostic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)

IT 50-02-2, Dexamethasone 50-18-0, Cyclophosphamide 50-35-1, Thalidomide 51-21-8, Fluorouracil 51-75-2, Mechlorethamine 53-03-2, Prednisone 57-22-7, Vincristine 58-05-9, Leucovorin 59-30-3D, Folic acid, analogs 67-99-2, Aspergillin 120-73-0D, Purine, analogs 147-94-4, Cytosine arabinoside 148-82-3, Melphalan 151-56-4D, Ethyleneimine, derivs. 289-95-2D, Pyrimidine, analogs 671-16-9, Procarbazine 865-21-4, Vinblastine 1406-72-0, Restrictocin 1407-48-3, .alpha.-Sarcin 9001-99-4, Ribonuclease 11056-06-7, Bleomycin 12654-97-6D, Triazine, derivs. 13010-20-3D, Nitrosourea, derivs. 15663-27-1, Cisplatin 23214-92-8, Doxorubicin 25316-40-9, Adriamycin 33069-62-4, Taxol 33419-42-0, Etoposide 37270-94-3, Platelet factor 4 37300-21-3, Pentosan polysulfate 75706-12-6, SU-101 86090-08-6, Angiostatin 96187-53-0, Brequinar 129298-91-5, TNP-470 134633-29-7, Tecogalan

sodium 188417-67-6, CM-101 324740-00-3, LM-609  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (arsenide compd. system for selective targeting of apoptotic cell)  
 IT 70-18-8, Glutathione, reactions 98-50-0, p-Arsanilic acid 598-21-0,  
 Bromoacetyl bromide 89889-52-1 123761-26-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (arsenide compd. system for selective targeting of apoptotic cell)  
 IT 51146-91-9P 331722-76-0P 331722-77-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (arsenide compd. system for selective targeting of apoptotic cell)  
 IT 14133-76-7, Technetium-99, biological studies  
 RL: DGN (Diagnostic use); PAC (Pharmacological activity); THU (Therapeutic  
 use); BIOL (Biological study); USES (Uses)  
 (metastable; arsenide compd. system for selective targeting of  
 apoptotic cell)  
 IT 527969-70-6 527969-71-7  
 RL: PRP (Properties)  
 (unclaimed sequence; arsenide compd. system for selective targeting of  
 apoptotic cells)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bazarbachi, A; Blood 1999, V93(1), P278 CAPLUS
- (2) Institut Nat de La Sante Et de La Recherche Medicale Inserm; FR 2781674 A  
 2000 CAPLUS
- (3) Parker Hughes Institute; WO 0056742 A 2000 CAPLUS
- (4) Polarx Biopharmaceuticals Inc; WO 9918798 A 1999 CAPLUS
- (5) Unisearch Ltd; WO 0121628 A 2001 CAPLUS

L5 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:736109 CAPLUS

DN 137:257647

ED Entered STN: 27 Sep 2002

TI Use of a substantially cell membrane impermeable arsenoxide compound for  
 treating arthritis

IN Hogg, Philip John; Donoghue, Neil

PA Unisearch Limited, Australia

SO PCT Int. Appl., 91 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-285

ICS A61P019-02

CC 1-7 (Pharmacology)

Section cross-reference(s): 34, 63

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | WO 2002074305   | A1   | 20020926 | WO 2002-AU310   | 20020319 |
|      | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,<br>GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,<br>LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,<br>PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,<br>UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,<br>TJ, TM |      |          |                 |          |
|      | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,<br>CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,<br>BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| EP   | 1379233   | A1   | 20040114 | EP 2002-704485  | 20020319 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  |      |          |                 |          |
| US   | 2004138102  | A1   | 20040715 | US 2004-472252  | 20040315 |
| PRAI | AU 2001-3798  | A    | 20010319 |                 |          |
|      | WO 2002-AU310   | W    | 20020319 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| WO 2002074305 | ICM   | A61K031-285                        |
|               | ICS   | A61P019-02                         |

WO 2002074305 ECLA A61K031/285; A61K047/48H4  
US 2004138102 NCL 514/006.000  
ECLA A61K031/285; A61K047/48H4

OS MARPAT 137:257647

AB The invention provides a method of treatment and/or prophylaxis of arthritis in a vertebrate, comprising administering a therapeutically effective amt. of a compd. A-(L-Y)p [A = at least one substantially cell-membrane impermeable pendant group; L = linker and/or spacer group; Y = at least one arsenoxide or arsenoxide equiv.; p = 1-10; the sum total of carbon atoms in A and L together is greater than 6], or a pharmaceutically acceptable salt thereof, optionally together with a pharmaceutically acceptable carrier, diluent or excipient. Prepn. of compds. of the invention is described.

ST arsenoxide deriv prepn arthritis treatment cell membrane impermeability

IT Animal cell line

(3T3; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Animal cell line

(BxPc3; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Animal cell line

(HT-1080; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Arthritis

(adjuvant; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Gout

(and calcific peri-arthritis and enteropathic arthritis; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems

(capsules; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Angiogenesis inhibitors

Antiarthritics

Antirheumatic agents

Arthritis

Cell membrane

Cytotoxic agents

Fluorescent substances

Hand

Hip

Human

Macrophage

Osteoarthritis

Polymorphonuclear leukocyte

Rheumatoid arthritis

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Thioredoxins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Radionuclides, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Transition metals, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Arthritis

(chronic; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(endothelial cell surface; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Blood vessel

(endothelium; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems

(inhalants; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems

(injections; cell membrane impermeable arsenoxide compd. for treating

arthritis)

IT Drug delivery systems  
(intra-articular; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Joint, anatomical  
(knee, and thumb; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Amines, biological studies  
Amino acids, biological studies  
Oligosaccharides, biological studies  
Peptides, biological studies  
Proteins  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(linked arsenoxide derivs.; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems  
(lotions; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems  
(ointments, creams; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems  
(ointments; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems  
(parenterals; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Arthritis  
(polyarthritis, and oligoarthritis and juvenile arthritis; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Sulfhydryl group  
(proteins contg., linked arsenoxide derivs.; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Arthritis  
(psoriatic arthritis, and peripheral and septic arthritis; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Blood vessel  
(smooth muscle; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Drug delivery systems  
(topical; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT Endothelium  
(vascular; cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 59-52-9, 2,3,-Dimercapto-1-propanol 1077-28-7, 6,8-Thioctic acid  
3483-12-3, Dithiothreitol 37318-49-3, Protein disulfide isomerase  
117525-19-6 331722-91-9  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 331722-70-4P  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 331722-78-2P  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 52-90-4D, L-Cysteine, derivs. 56-84-8D, L-Aspartic acid, linked arsenoxide derivs. 56-86-0D, L-Glutamic acid, linked arsenoxide derivs. 56-87-1D, L-Lysine, linked arsenoxide derivs. 58-85-5D, Biotin, linked arsenoxide derivs. 70-18-8D, Glutathione, derivs. 70-18-8D, Glutathione, linked arsenoxide derivs. 74-79-3D, L-Arginine, linked arsenoxide derivs. 498-40-8D, Cysteic acid, linked arsenoxide derivs. 2321-07-5D, Fluorescein, linked arsenoxide derivs. 3416-24-8D, Glucosamine, linked arsenoxide derivs. 19246-18-5D, derivs. 19246-18-5D, Cysteinylglycine, linked arsenoxide derivs. 172777-84-3D, Cy 5.5, linked arsenoxide derivs. 331815-00-0 331815-01-1

331815-02-2 331815-03-3 331815-04-4 331815-05-5 331815-06-6  
331815-07-7 331815-08-8 331815-09-9 331815-10-2 463313-69-1  
463313-70-4 463313-71-5

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 1122-90-3P 331722-77-1P 331722-79-3P \*\*\*331722-80-6P\*\*\*  
331722-81-7P 331722-82-8P 331722-87-3P 331722-88-4P 331722-90-8P  
461644-49-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 10028-17-8, Tritium, biological studies 10043-66-0, Iodine-131,  
biological studies 13967-65-2, Holmium-166, biological studies  
14119-09-6, Gallium-67, biological studies 14158-31-7, Iodine-125,  
biological studies 14265-75-9, Lutetium-177, biological studies  
14378-26-8, Rhenium-188, biological studies 14596-37-3, Phosphorus-32,  
biological studies 14762-75-5, Carbon-14, biological studies  
14913-89-4, biological studies 14998-63-1, Rhenium-186, biological  
studies 15117-53-0, Sulfur-35, biological studies 15715-08-9,  
Iodine-123, biological studies 15749-66-3, Phosphorus-33, biological  
studies 15750-15-9, Indium-111, biological studies 15757-86-5,  
Copper-67, biological studies 15766-00-4, Samarium-153, biological  
studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cell membrane impermeable arsenoxide compd. for treating arthritis)

IT 14133-76-7, Technetium-99, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(metastable; cell membrane impermeable arsenoxide compd. for treating  
arthritis)

IT 1119-62-6P 51146-91-9P 57757-57-0P 331722-76-0P 331722-83-9P  
331722-84-0P 331722-86-2P 461644-47-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(prepn. and reaction; cell membrane impermeable arsenoxide compd. for  
treating arthritis)

IT 56-84-8, L-Aspartic acid, reactions 56-86-0, L-Glutamic acid, reactions  
66-84-2, D-Glucosamine hydrochloride 70-18-8, Glutathione, reactions  
98-50-0 107-96-0, 3-Mercaptopropanoic acid 498-40-8, L-Cysteic acid  
598-21-0, Bromoacetyl bromide 6066-82-6, N-Hydroxysuccinimide  
89889-52-1 123761-26-2 148356-00-7 148356-01-8 172777-84-3; Cy 5.5

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction; cell membrane impermeable arsenoxide compd. for treating  
arthritis)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Cunningham; Eur J Biochem 1994, V221, P285 CAPLUS
- (2) Fairlamb; Ann Rev Microbiol 1992, V46, P695 CAPLUS
- (3) Fairlamb; Proc Natl Acad Sci 1989, V86, P2607 CAPLUS
- (4) Unisearch Limited; WO 0121628 A1 2001 CAPLUS

L5 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:228897 CAPLUS

DN 134:261272

ED Entered STN: 30 Mar 2001

TI Cell membrane-impermeable arsenoxide compounds, their preparation,  
pharmaceutical compositions, and therapeutic and diagnostic use

IN Hogg, Philip John; Donoghue, Neil

PA Unisearch Limited, Australia

SO PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07F009-20

ICS C07F009-78; C07F009-74

CC 1-12 (Pharmacology)

Section cross-reference(s): 29, 63

FAN.CNT 1

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2001021628  | A1   | 20010329 | WO 2000-AU1143  | 20000920 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, |      |          |                 |          |

CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
 YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2385322 AA 20010329 CA 2000-2385322 20000920  
 EP 1228076 A1 20020807 EP 2000-965636 20000920  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL  
 JP 2003509516 T2 20030311 JP 2001-525003 20000920  
 AU 778781 B2 20041223 AU 2000-76320 20000920  
 ZA 2002002272 A 20030725 ZA 2002-2272 20020320  
 PRAI AU 1999-2967 A 19990920  
 WO 2000-AU1143 W 20000920

# CLASS

| PATENT NO.    | CLASS  | PATENT FAMILY CLASSIFICATION CODES |
|---------------|--|------------------------------------|
| WO 2001021628 | ICM  | C07F009-20                         |
|               | ICS  | C07F009-78; C07F009-74             |
| WO 2001021628 | ECLA   | C07F009/78; C07F009/80B            |
| OS            | MARPAT 134:261272  |                                    |
| AB            | The invention discloses compds. A(LY)p, (A = .gtoreq.1 substantially cell-membrane impermeable pendant group; L = linker and/or spacer; Y = .gtoreq.1 arsenoxide or arsenoxide equiv.; p = 1-10; sum total of C atoms in A and L together >6). Prepn. of e.g. 4-[N-(S-glutathionylacetyl)amino]phenylarsenoxide is described, as are e.g. the antitumor activity, tumor imaging ability, and activity inhibiting HIV infection of compds. of the invention. Pharmaceutical formulations are also described.          |                                    |
| ST            | membrane impermeable arsenoxide compd prepn therapeutic; diagnostic membrane impermeable arsenoxide compd prep; antitumor tumor imaging arsenoxide compd; HIV infection arsenoxide compd   |                                    |
| IT            | Fluorescent substances<br>(arsenoxide derivs.; substantially cell membrane-impermeable compd. and use thereof)   |                                    |
| IT            | Amines, biological studies<br>Amino acids, biological studies<br>Oligosaccharides, biological studies<br>Peptides, biological studies<br>Proteins, general, biological studies<br>Radionuclides, biological studies<br>Transition metals, biological studies<br>RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)<br>(arsenoxide derivs.; substantially cell membrane-impermeable compd. and use thereof) |                                    |
| IT            | Drug delivery systems<br>(capsules; substantially cell membrane-impermeable compd. and use thereof)  |                                    |
| IT            | Lung, neoplasm<br>(carcinoma, imaging; substantially cell membrane-impermeable compd. and use thereof)   |                                    |
| IT            | Cell proliferation<br>(disease; substantially cell membrane-impermeable compd. and use thereof)  |                                    |
| IT            | Blood vessel<br>(endothelium, cell; substantially cell membrane-impermeable compd. and use thereof)  |                                    |
| IT            | Antitumor agents<br>(fibrosarcoma; substantially cell membrane-impermeable compd. and use thereof)   |                                    |
| IT            | Drug delivery systems<br>(inhalants; substantially cell membrane-impermeable compd. and use thereof)   |                                    |
| IT            | Lung, neoplasm<br>Pancreas, neoplasm<br>(inhibitors; substantially cell membrane-impermeable compd. and use thereof)   |                                    |

thereof)

IT Drug delivery systems  
(injections; substantially cell membrane-impermeable compd. and use thereof)

IT Drug delivery systems  
(lotions; substantially cell membrane-impermeable compd. and use thereof)

IT Antitumor agents  
(lung; substantially cell membrane-impermeable compd. and use thereof)

IT Proteins, specific or class  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(mercapto-contg., arsenoxide derivs.; substantially cell membrane-impermeable compd. and use thereof)

IT Drug delivery systems  
(ointments, creams; substantially cell membrane-impermeable compd. and use thereof)

IT Drug delivery systems  
(ointments; substantially cell membrane-impermeable compd. and use thereof)

IT Antitumor agents  
(pancreas; substantially cell membrane-impermeable compd. and use thereof)

IT Drug delivery systems  
(parenterals; substantially cell membrane-impermeable compd. and use thereof)

IT Proliferation inhibition  
(proliferation inhibitors; substantially cell membrane-impermeable compd. and use thereof)

IT Drug delivery systems  
(solns., ophthalmic; substantially cell membrane-impermeable compd. and use thereof)

IT Angiogenesis inhibitors  
Anti-AIDS agents  
Anti-inflammatory agents  
Anticoagulants  
Antitumor agents  
Antiviral agents  
Autoimmune disease  
Blood vessel, disease  
CD4-positive T cell  
Cardiovascular agents  
Cell membrane  
Drug delivery systems  
Human immunodeficiency virus 1  
Imaging agents  
(substantially cell membrane-impermeable compd. and use thereof)

IT Thioredoxins  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
(substantially cell membrane-impermeable compd. and use thereof)

IT CD4 (antigen)  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(substantially cell membrane-impermeable compd. and use thereof)

IT Drug delivery systems  
(topical; substantially cell membrane-impermeable compd. and use thereof)

IT 14133-76-7, Technetium-99, biological studies  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(metastable, arsenoxide derivs.; substantially cell membrane-impermeable compd. and use thereof)

IT 1119-62-6P 1122-90-3P 51146-91-9P 57757-57-0P 331722-76-0P  
331722-83-9P 331722-84-0P 331722-85-1P 331722-86-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction; substantially cell membrane-impermeable compd.



and use thereof)

IT 56-84-8, L-Aspartic acid, reactions 56-86-0, L-Glutamic acid, reactions  
66-84-2, D-Glucosamine hydrochloride 70-18-8, Glutathione, reactions  
98-50-0, p-Arsanilic acid 107-96-0, 3-Mercaptopropanoic acid 498-40-8,  
L-Cysteic acid 598-21-0, Bromoacetyl bromide 6066-82-6,  
N-Hydroxysuccinimide 67278-31-3 89889-52-1 123740-08-9 148356-00-7  
148356-01-8 172777-84-3, Cy5.5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction; substantially cell membrane-impermeable compd. and use thereof)

IT 331722-70-4P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(substantially cell membrane-impermeable compd. and use thereof)

IT 331722-77-1P 331722-78-2P 331722-79-3P \*\*\*331722-80-6P\*\*\*  
331722-81-7P 331722-82-8P 331722-87-3P 331722-88-4P 331722-89-5P  
331722-90-8P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(substantially cell membrane-impermeable compd. and use thereof)

IT 56-84-8D, Aspartic acid, arsenoxide derivs. 56-86-0D, Glutamic acid, arsenoxide derivs. 56-87-1D, Lysine, arsenoxide derivs. 58-85-5D, Biotin, arsenoxide derivs. 70-18-8D, Glutathione, arsenoxide derivs. 74-79-3D, Arginine, arsenoxide derivs. 498-40-8D, Cysteic acid, arsenoxide derivs. 2321-07-5D, Fluorescein, arsenoxide derivs. 3416-24-8D, Glucosamine, arsenoxide derivs. 7440-38-2D, Arsenic, arsenoxide derivs., biological studies 10028-17-8D, Tritium, arsenoxide derivs., biological studies 10043-66-0D, Iodine-131, arsenoxide derivs., biological studies 13967-65-2D, Holmium-166, arsenoxide derivs., biological studies 14119-09-6D, Gallium-67, arsenoxide derivs., biological studies 14158-31-7D, Iodine-125, arsenoxide derivs., biological studies 14265-75-9D, Lutetium-177, arsenoxide derivs., biological studies 14378-26-8D, Rhenium-188, arsenoxide derivs., biological studies 14596-37-3D, Phosphorus-32, arsenoxide derivs., biological studies 14762-75-5D, Carbon-14, arsenoxide derivs., biological studies 14913-89-4D, Arsenoxide derivs., biological studies 14998-63-1D, Rhenium-186, arsenoxide derivs., biological studies 15117-53-0D, Sulfur-35, arsenoxide derivs., biological studies 15715-08-9D, Iodine-123, arsenoxide derivs., biological studies 15749-66-3D, Phosphorus-33, arsenoxide derivs., biological studies 15750-15-9D, Indium-111, arsenoxide derivs., biological studies 15757-86-5D, Copper-67, arsenoxide derivs., biological studies 15766-00-4D, Samarium-153, arsenoxide derivs., biological studies 19246-18-5D, Cysteinylglycine, arsenoxide derivs. 172777-84-3D, Cy5.5, arsenoxide derivs. 331722-71-5 331722-72-6 331722-73-7 331722-74-8 331746-49-7 331815-00-0 331815-01-1 331815-02-2 331815-03-3 331815-04-4 331815-05-5 331815-06-6 331815-07-7 331815-08-8 331815-09-9 331815-10-2  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(substantially cell membrane-impermeable compd. and use thereof)

IT 37318-49-3, Protein disulfide isomerase  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(substantially cell membrane-impermeable compd. and use thereof)

IT 59-52-9, 2,3-Dimercapto-1-propanol 69-78-3, DTNB 1077-28-7, 6,8-Thioctic acid 3483-12-3, Dithiothreitol  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(substantially cell membrane-impermeable compd. and use thereof)

IT 117525-19-6 331722-91-9  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
(substantially cell membrane-impermeable compd. and use thereof)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bhargava; Mol Biochem Parasitol 1983, V9, P29 CAPLUS
- (2) Carter; Nature 1993, V361(6408), P173 CAPLUS

- (3) Cunningham; Eur J Biochem 1994, V221, P285 CAPLUS
- (4) Fairlamb; Proc Natl Acad Sci 1989, V86, P2607 CAPLUS
- (5) Fairlamb, A; Ann Rev Microbiol 1992, V46, P695 CAPLUS
- (6) Friedheim; US 3883650 1975 CAPLUS
- (7) Pisciotto; Biochimica et Biophysica acta 1980, V628, P241 CAPLUS

L5 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:412701 CAPLUS

DN 129:145356

ED Entered STN: 08 Jul 1998

TI The influence of fluorescent dye structure on the electrophoretic mobility of end-labeled DNA

AU Tu, Oanh; Knott, Tim; Marsh, Michele; Bechtol, Kate; Harris, Dennis; Barker, David; Bashkin, John

CS Molecular Dynamics, Sunnyvale, CA, 94086, USA

SO Nucleic Acids Research (1998), 26(11), 2797-2802

CODEN: NARHAD; ISSN: 0305-1048

PB Oxford University Press

DT Journal

LA English

CC 3-1 (Biochemical Genetics)

Section cross-reference(s): 6

AB Over the past 10 yr, fluorescent end-labeling of DNA fragments has evolved into the preferred method of DNA detection for a wide variety of applications, including DNA sequencing and PCR fragment anal. One of the advantages inherent in fluorescent detection methods is the ability to perform multi-color analyses. Unfortunately, labeling DNA fragments with different fluorescent tags generally induces disparate relative electrophoretic mobilities for the fragments. Mobility-shift corrections must therefore be applied to the electrophoretic data to compensate for these effects. These corrections may lead to increased errors in the estn. of DNA fragment sizes and reduced confidence in DNA sequence information. Here, we present a systematic study of the relationship between dye structure and the resultant electrophoretic mobility of end-labeled DNA fragments. We have used a cyanine dye family as a paradigm and high-resoln. capillary array electrophoresis (CAE) as the instrumentation platform. Our goals are to develop a general understanding of the effects of dyes on DNA electrophoretic mobility and to synthesize a family of DNA end-labels that impart identically matched mobility influences on DNA fragments. Such matched sets could be used in DNA sequencing and fragment sizing applications on capillary electrophoresis instrumentation.

ST fluorescent dye labeled DNA electrophoretic mobility

IT DNA

RL: PRP (Properties)

(fluorescent dye-labeled; influence of fluorescent dye structure on electrophoretic mobility of end-labeled DNA)

IT Electrophoresis

(influence of fluorescent dye structure on electrophoretic mobility of end-labeled DNA)

IT 146368-11-8D, DNA labeled with 198505-20-3D, DNA labeled with  
198505-24-7D, DNA labeled with 198505-25-8D, DNA labeled with  
198505-26-9D, DNA labeled with 198586-58-2D, DNA labeled with  
198586-59-3D, DNA labeled with 210834-16-5D, DNA labeled with  
210834-17-6D, DNA labeled with 210834-18-7D, DNA labeled with  
210834-19-8D, DNA labeled with 210834-20-1D, DNA labeled with  
\*\*\*210834-21-2D\*\*\*, DNA labeled with 210834-22-3D, DNA labeled with  
210834-23-4D, DNA labeled with 210834-24-5D, DNA labeled with  
210834-25-6D, DNA labeled with 210834-26-7D, DNA labeled with  
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210836-66-1D, DNA labeled with 210836-67-2D, DNA labeled with  
210836-68-3D, DNA labeled with 210892-23-2D, DNA labeled with

RL: PRP (Properties)

(influence of fluorescent dye structure on electrophoretic mobility of end-labeled DNA)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Asseline, U; Bioconjugate Chem 1996, V7, P369 CAPLUS
- (2) Bashkin, J; Appl Theor Electrophoresis 1996, V6, P23 CAPLUS
- (3) Bashkin, J; J Capillary Electrophoresis 1996, V3, P1
- (4) Bustamante, C; Biopolymers 1984, V23, P629 CAPLUS

- (5) Cobb, K; Anal Chem 1990, V62, P2478 CAPLUS
- (6) Ernst, L; Cytometry 1989, V10, P3 CAPLUS
- (7) Hjerten, S; J Chromatog 1985, V347, P191 CAPLUS
- (8) Hung, S; Anal Biochem 1996, V243, P15 CAPLUS
- (9) Hung, S; Anal Biochem 1997, V252, P78 CAPLUS
- (10) Ju, J; Anal Biochem 1995, V231, P131 CAPLUS
- (11) Ju, J; Nucleic Acids Res 1996, V24, P1144 CAPLUS
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- (13) Kricka, L; Nonisotopic DNA Probe Techniques 1992
- (14) Marsh, M; J Capillary Electrophoresis 1997, V4, P83 CAPLUS
- (15) Metzker, M; Science 1996, V271, P1420 CAPLUS
- (16) Middendorf, L; Electrophoresis 1992, V13, P487 CAPLUS
- (17) Mujumdar, R; Bioconjugate Chem 1993, V4, P105 CAPLUS
- (18) Mujumdar, R; Cytometry 1989, V10, P11 CAPLUS
- (19) Sammes, P; Chem Soc Reviews 1994, V23, P327 CAPLUS
- (20) Satyanarayana, S; Biochemistry 1992, V31, P9319 CAPLUS
- (21) Smith, L; Nature 1986, V321, P674 CAPLUS
- (22) Southwick, P; Cytometry 1990, V11, P418 CAPLUS
- (23) Weinberger, R; Practical Capillary Electrophoresis 1993

=> s hohsaka?.in,au.

0 HOHSAKA?  
168896 AU  
1013 AUS  
169841 AU

(AU OR AUS)

L6 0 HOHSAKA?.IN,AU.  
(HOHSAKA?(1W)AU)

=> s hohsaka, ?.in,au.

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L2 STRUCTURE UPLOADED

L3 37 S L1 SSS FULL

L4 0 S L2 SSS FULL

FILE 'CAPLUS' ENTERED AT 12:06:52 ON 27 JUN 2005

L5 11 S L3  
L6 0 S HOHSAKA?.IN,AU.

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| FULL ESTIMATED COST                        | 38.25            | 361.12        |
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NEWS 3 FEB 28 PATDPAFULL - New display fields provide for legal status data from INPADOC  
NEWS 4 FEB 28 BABS - Current-awareness alerts (SDIs) available  
NEWS 5 MAR 02 GBFULL: New full-text patent database on STN  
NEWS 6 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced  
NEWS 7 MAR 03 MEDLINE file segment of TOXCENTER reloaded  
NEWS 8 MAR 22 KOREAPAT now updated monthly; patent information enhanced  
NEWS 9 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY  
NEWS 10 MAR 22 PATDPASPC - New patent database available  
NEWS 11 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags  
NEWS 12 APR 04 EPFULL enhanced with additional patent information and new fields  
NEWS 13 APR 04 EMBASE - Database reloaded and enhanced  
NEWS 14 APR 18 New CAS Information Use Policies available online  
NEWS 15 APR 25 Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAPLUS and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.  
NEWS 16 APR 28 Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS  
NEWS 17 MAY 23 GBFULL enhanced with patent drawing images  
NEWS 18 MAY 23 REGISTRY has been enhanced with source information from CHEMCATS  
NEWS 19 JUN 06 STN Patent Forums to be held in June 2005  
NEWS 20 JUN 06 The Analysis Edition of STN Express with Discover! (Version 8.0 for Windows) now available  
NEWS 21 JUN 13 RUSSIAPAT: New full-text patent database on STN  
NEWS 22 JUN 13 FRFULL enhanced with patent drawing images  
NEWS 23 JUN 20 MEDICONF to be removed from STN  
  
NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005  
  
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| FULL ESTIMATED COST  | 0.06       | 0.27    |

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|                      | ENTRY      | SESSION |
| FULL ESTIMATED COST  | 0.21       | 0.48    |

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=> s ep 1092753/pn  
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 (EP1092753/PN)

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|----------------------|------------|---------|
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|                      | ENTRY      | SESSION |

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=> tra rn l1

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L3 11 L2

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|----------------------|---------------------|------------------|
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FILE COVERS 1907 - 27 Jun 2005 VOL 143 ISS 1  
FILE LAST UPDATED: 26 Jun 2005 (20050626/ED)

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This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> s l3

L4 32 L3

=> s 14 not 11  
L5 31 L4 NOT L1

=> d all 1-31

L5 ANSWER 1 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 2004:307343 CAPLUS  
DN 140:322868  
ED Entered STN: 15 Apr 2004  
TI Production of meso substituted cyanine dyes  
IN Timpe, Hans-Joachim; Kottmair, Eduard  
PA Kodak Polychrome Graphics GmbH, Germany  
SO Ger., 20 pp.  
CODEN: GWXXAW  
DT Patent  
LA German  
IC ICM C09B023-12  
ICS C07D491-00  
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 27, 28

FAN.CNT 1

|      | PATENT NO.       | KIND   | DATE     | APPLICATION NO.  | DATE     |
|------|------------------|--|----------|------------------|----------|
| PI   | DE 10257188      | B3   | 20040415 | DE 2002-10257188 | 20021206 |
|      | JP 2004190000    | A2   | 20040708 | JP 2003-168326   | 20030612 |
|      | WO 2004052995    | A1   | 20040624 | WO 2003-EP13727  | 20031204 |
|      | W:               | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                  |          |
|      | RW:              | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                  |          |
| PRAI | DE 2002-10257188 | A  | 20021206 |                  |          |

CLASS

| PATENT NO.    | CLASS  | PATENT FAMILY CLASSIFICATION CODES   |
|---------------|--------|--|
| DE 10257188   | ICM    | C09B023-12   |
|               | ICS    | C07D491-00   |
| DE 10257188   | ECLA   | C09B023/00D  |
| JP 2004190000 | FTERM  | 4C063/AA03; 4C063/BB03; 4C063/CC12; 4C063/CC67; 4C063/CC92; 4C063/DD06; 4C063/EE10; 4C204/AB01; 4C204/BB10; 4C204/CB03; 4C204/DB06; 4C204/EB02; 4C204/GB09; 4H056/CA02; 4H056/CA03; 4H056/CA05; 4H056/CB01; 4H056/CC02; 4H056/CC08; 4H056/CE03; 4H056/DD03; 4H056/DD04; 4H056/DD19; 4H056/FA06 |
| WO 2004052995 | ECLA   | C09B023/00D  |
| OS            | MARPAT | 140:322868   |
| GI            |        |  |

/ Structure 1 in file .gra /

AB A single-stage procedure for the prodn. of meso substituted cyanine IR dyes is made available by the reaction of a dye (I; A = H, halogen, substituted amino; L = optionally substituted alkanediyl; Z- = anion) with (a) a methylene compd. or a quaternary salt and (b) a compd. selected from functionalized (hetero)arom. compds., satd. cyclic amines, and heteroarom. compds. Examples were given for cyclohexene-based dyes.

ST cyanine IR meso substituted prodn

IT Cyanine dyes  
(cationic; prodn. of meso substituted cyanine dyes)

IT Cyanine dyes  
(near-IR-absorbing; prodn. of meso substituted cyanine dyes)

IT 269401-43-6P 335384-21-9P 440102-72-7P 679426-46-1P 679426-47-2P

679426-48-3P 679426-49-4P 679426-50-7P 679426-51-8P 679426-52-9P  
679426-54-1P 679426-56-3P 679426-58-5P 679426-60-9P 679426-63-2P  
679426-65-4P 679426-67-6P 679426-70-1P 679426-72-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(dye; prodn. of meso substituted cyanine dyes)

IT 577791-86-7P

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(intermediate; prodn. of meso substituted cyanine dyes)

IT 86-93-1 100-02-7, 4-Nitrophenol, reactions 106-53-6, 4-Bromothiophenol  
106-54-7, 4-Chlorothiophenol 108-95-2, Phenol, reactions 108-98-5,  
Thiophenol, reactions 118-12-7, Fischer base 123-30-8, 4-Aminophenol  
150-76-5, 4-Methoxyphenol 540-72-7, Sodium rhodanide 873-55-2, Sodium  
benzenesulfinate 1122-58-3, 4-(Dimethylamino)pyridine 1193-02-8,  
4-Aminothiophenol 1849-36-1, 4-Nitrothiophenol 6264-40-0 7681-82-5,  
Sodium iodide, reactions 13183-79-4 16925-25-0, Sodium  
hexafluoroantimonate 21324-39-0, Sodium hexafluorophosphate 24854-43-1  
63857-00-1 \*\*\*141914-99-0\*\*\*

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; prodn. of meso substituted cyanine dyes)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; EP 1006116 A1 CAPLUS

(2) Anon; EP 1188797 A2 CAPLUS

(3) Anon; EP 1223196 A2 CAPLUS

L5 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:49473 CAPLUS

DN 138:115130

ED Entered STN: 21 Jan 2003

TI Optical recording material containing cyanine dye with fluoroalkyl groups

IN Nagano, Hideki

PA Hitachi Maxell Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS C09B023-00; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003019865  | A2   | 20030121 | JP 2001-206641  | 20010706 |
| PRAI | JP 2001-206641 |      | 20010706 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2003019865 | ICM   | B41M005-26                         |
|               | ICS   | C09B023-00; G11B007-24             |

OS MARPAT 138:115130

GI

/ Structure 2 in file .gra /

AB The material, recordable and readable by light radiation, has a recording layer contg. a cyanine dye I or II [n = 0-3; Y1-2 = CMe2, C:C, S, O; X = counter io such as halide, halogen compd. ion, or org. ion; A1-2 = (un)substituted benzene ring; R1-4 = fluoroalkyl, R1 and R2, R3 and R4 have the same C no.]. The material shows good recording and reading properties.

ST optical recording material cyanine dye fluoroalkyl group

IT Optical ROM disks

(optical recording material using cyanine dye with fluoroalkyl group)

IT Cyanine dyes



(optical recording material using cyanine dye with fluoroalkyl groups)

IT Optical disks  
(write-once read-many; optical recording material using cyanine dye with fluoroalkyl groups)

IT \*\*\*7696-70-0\*\*\*  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(deterioration preventing agent; optical recording material using cyanine dye with fluoroalkyl groups)

IT 7440-22-4, Silver, uses 7440-57-5, Gold, uses  
RL: DEV (Device component use); USES (Uses)  
(intermediate layer; optical recording material using cyanine dye with fluoroalkyl groups)

IT 486990-07-2 486990-08-3 486990-10-7 486990-11-8 486990-12-9  
486990-13-0  
RL: DEV (Device component use); USES (Uses)  
(optical recording material using cyanine dye with fluoroalkyl groups)

L5 ANSWER 3 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:650025 CAPLUS

DN 137:187163

ED Entered STN: 28 Aug 2002

TI Radiation-curable polymer compositions and their near infrared ray-absorbing inks and fluorescent inks

IN Kitayama, Yasuyuki; Kiyoyagi, Noriko

PA Nippon Kayaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-44

ICS C08F002-48; C08F290-06; C09D011-10

CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2002241416 | A2   | 20020828 | JP 2001-44452   | 20010221 |
| PRAI | JP 2001-44452 |      | 20010221 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2002241416 | ICM   | C08F002-44                         |
|               | ICS   | C08F002-48; C08F290-06; C09D011-10 |

OS MARPAT 137:187163

GI

/ Structure 3 in file .gra /

AB The compns. comprise (A) polymers having ethylenically unsatd. groups, (B) compds. absorbing 650-1000 nm ray in near IR region, and (C) light stabilizers A-p-C6H4NH-p-C6H4-NR12 (A = nitroso, halo, OH, alkoxy, carboxyl, R2COR3, R2CO2R3; R1, R3 = C1-4 alkyl; R2 = C1-4 alkylene). Thus, a compn. contg. dipentaerythritol hexaacrylate 15, Epikote R 1004 (bisphenol A epoxy resin) acrylate 30, acryloylmorpholine 15, polymn. catalyst 4, I 0.5, and ON-p-C6H4NH-p-C6H4NMe2 1.0 part was applied on a coated paper and irradiated with UV to give a cured product with improved adhesion and good light and abrasion resistance.

ST radiation curable polymer ink near IR absorber; coating pentaerythritol acrylate bisphenol epoxy acryloylmorpholine polymer; light stabilizer nitrosophenyl methylaminophenyl ink fluorescent

IT Optical materials

(IR absorbers, near IR; radiation-curable polymer compns. for near IR ray-absorbing inks and fluorescent inks)

IT Coating materials

(abrasion-resistant; radiation-curable polymer compns. for near IR ray-absorbing inks and fluorescent inks)

IT IR materials

(absorbers, near IR; radiation-curable polymer compns. for near IR ray-absorbing inks and fluorescent inks)

IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic; radiation-curable polymer compns. for near IR ray-absorbing  
 inks and fluorescent inks)

IT Coating materials  
 Inks  
 (fluorescent; radiation-curable polymer compns. for near IR  
 ray-absorbing inks and fluorescent inks)

IT Fluorescent substances  
 (inks; radiation-curable polymer compns. for near IR ray-absorbing inks  
 and fluorescent inks)

IT Coating materials  
 (light-resistant; radiation-curable polymer compns. for near IR  
 ray-absorbing inks and fluorescent inks)

IT Light stabilizers  
 (radiation-curable polymer compns. for near IR ray-absorbing inks and  
 fluorescent inks)

IT Inks  
 (radiation-curable, near IR absorbing; radiation-curable polymer  
 compns. for near IR ray-absorbing inks and fluorescent inks)

IT \*\*\*7696-70-0\*\*\*  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
 use); USES (Uses)  
 (light stabilizer; radiation-curable polymer compns. for near IR  
 ray-absorbing inks and fluorescent inks)

IT 66295-51-0 354540-12-8  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
 use); USES (Uses)  
 (near IR absorber; radiation-curable polymer compns. for near IR  
 ray-absorbing inks and fluorescent inks)

IT 449788-72-1P, Acryloylmorpholine-dipentaerythritol hexaacrylate-Epikote R  
 1004 acrylate copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (radiation-curable polymer compns. for near IR ray-absorbing inks and  
 fluorescent inks)

L5 ANSWER 4 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:514448 CAPLUS

DN 137:80280

ED Entered STN: 10 Jul 2002

TI Manufacture of asymmetric cyanine colorants and condensing agents for  
 methine chains of the colorants

IN Matsui, Takahiko; Kiyota, Tatsuya

PA Tamura Kaken Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09B023-00

ICS C07C251-12

CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic  
 Sensitizers)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002194240  | A2   | 20020710 | JP 2000-397529  | 20001227 |
| PRAI | JP 2000-397529 |      | 20001227 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2002194240 | ICM   | C09B023-00                         |
|               | ICS   | C07C251-12                         |

OS CASREACT 137:80280; MARPAT 137:80280

GI

AB Title colorants of high purity are prepd. by reacting 0.5-1.5 mol p-R-substituted anilines (R = electron-withdrawing group) with 1.0 mol mucohalogenic acids (COOH)CX1: CX2(CHO) (X1, X2 = halogen) to form condensing agents (A), reacting 0.5-1.5 g A with I [R1 = (substituted) alkyl, alkenyl, alkoxyalkyl; Y1 = H, alkyl, aryl, alkoxy, halogen, NO2, OH, OCF3, R3OH, R4COOR5, CH:CHCN, COOR6, (substituted) naphthalene residue with R3, R4 = C1-9 alkylene, R5, R6 = H or C1-9 alkyl; n = 1-4; X3 = Cl-, Br-, I-, ClO4-, BF4-, PF4-, SbF4-, PF6-, SbF6-, CH3SO4-, CH3PhSO3-] at an amt. equiv. to 1 g 1-butyl-2,3,3-trimethyl-benzindolium PF6- (II) to form intermediates, further reacting the intermediate with III (R2, Y2, X4, and m having similar description as R1, Y1, X3, and n, resp.; R1 different from R2 when Y1n = Y2m and vice versa). Reacting 6.6 g p-nitroaniline with 8.5 g mucochloric acid gave a condensing agent of 98% pure, 10 g of which was reacted with 10 g II to form 7.5 g an intermediate of 94% pure. Reacting 6.5 g the intermediate with 3.6 g N-methyl-2,3,3-trimethylbenzindolium PF6- gave 5.7 g IV of 99.6% pure.

ST asym cyanine dye manuf methine chain condensing agent; nitroaniline mucochloric acid reaction product condensing agent cyanine dye

IT Condensation reaction  
(agents; manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

IT Cyanine dyes  
(asym.; manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

IT Phosphonium compounds  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of cyanine dyes; manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

IT 440680-43-3P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(condensing agent; manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

IT 440680-45-5P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

IT 206764-05-8P \*\*\*303780-31-6P\*\*\* 440680-50-2P  
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

IT 87-56-9, Mucochloric acid 100-01-6, p-Nitroaniline, reactions  
365514-44-9 372081-65-7 440680-46-6 440680-48-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(manuf. of highly pure asym. cyanine dyes from condensing agents from p-nitroaniline and mucochloric acid)

L5 ANSWER 5 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:241274 CAPLUS

DN 136:286663

ED Entered STN: 28 Mar 2002

TI Memory layer of high-density recordable optical recording

IN Liao, Wen-Yih; Hu, Andrew Teh; Huang, Chien-Liang; Yang, Huei-Wen; Chen, Yun-Chiao; Yen, Wen-Hsin; Jeng, Tzuan-Ren; Huang, Der-Ray; Hu, Ding-Yih; Lee, Ming-Chia

PA Taiwan

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM G11B007-24

INCL 430270210

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|      |    |               |    |          |    |             |          |
|------|----|---------------|----|----------|----|-------------|----------|
| PI   | US | 2002037474    | A1 | 20020328 | US | 2000-727645 | 20001201 |
|      | JP | 2002103816    | A2 | 20020409 | JP | 2001-848    | 20010105 |
| PRAI | TW | 2000-89119319 | A  | 20000920 |    |             |          |

CLASS

| PATENT NO.     | CLASS | PATENT FAMILY CLASSIFICATION CODES                 |
|----------------|-------|--|
| US 20020037474 | ICM   | G11B007-24   |
|                | INCL  | 430270210  |
| US 2002037474  | NCL   | 430/270.210; 369/288.000; 430/945.000; 428/064.800 |
|                | ECLA  | G11B007/247  |

GI

/ Structure 5 in file .gra /

AB A high-d. recordable optical recording disk with a cyanine dye mixt. as a recording layer. The cyanine dye mixt. at least comprises cyanine dye I, II (R = phenylester group; X- = acid anion). An acceptable solvent is coated on circular substrate to control the coating process and to manuf. a high-d. recordable optical material. The cyanine dye mixt. has a chem. stability and a well soly. for org. solvent.

ST optical recording disk cyanine dye

IT Cyanine dyes  
Optical disks  
Optical recording  
(memory layer of high-d. recordable optical recording contg. cyanine dye mixt.)

IT \*\*\*7696-70-0\*\*\*  
RL: MOA (Modifier or additive use); USES (Uses)  
(photo-stabilizer; memory layer of high-d. recordable optical recording contg. cyanine dye mixt.)

IT 206451-14-1 223458-50-2  
RL: DEV (Device component use); USES (Uses)  
(recording layer; memory layer of high-d. recordable optical recording contg. cyanine dye mixt.)

IT 76-37-9, 2,2,3,3-Tetrafluoro-1-propanol 215370-77-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(solvent; memory layer of high-d. recordable optical recording contg. cyanine dye mixt.)

L5 ANSWER 6 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:617278 CAPLUS

DN 135:203064

ED Entered STN: 24 Aug 2001

TI Information optical recording medium

IN Otsuka, Takahiro; Iuchi, Shinichiro; Matsuki, Yota; Yoshimizu, Takuhiro

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G11B007-24  
ICS B41M005-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 41

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2001229574 | A2   | 20010824 | JP 2000-35991   | 20000214 |
| PRAI | JP 2000-35991 |      | 20000214 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2001229574 | ICM   | G11B007-24                         |
|               | ICS   | B41M005-26                         |

OS MARPAT 135:203064

GI

/ Structure 6 in file .gra /

AB The recording medium comprises a (polycarbonate) substrate and a recording layer contg. a cyanine dye I [R1, R2 = alkyl of different C no.; R2 = C.ltoreq.5 alkyl; the C no. difference is 1-4; A, A' = (substituted or condensed) benzene ring; R3-6 = alkyl, aryl; X = BF4, ClO4, PF6, halogen; n = integer of .gtoreq.1]. The claimed dye has relatively high soly. (5-20%) to org. solvents (i.e., dichloroethane, Et cellosolve) which do not dissolve a polycarbonate substrate, than those of the other dyes (1-4%) having similar structure to the claimed one.

ST information recording optical disk cyanine dye; polycarbonate substrate optical recording disk cyanine dye

IT Cyanine dyes  
Optical disks  
(information recording optical disks contg. cyanine dye in recording layer)

IT Polycarbonates, uses  
RL: DEV (Device component use); USES (Uses)  
(substrate; information recording optical disks contg. cyanine dye in recording layer)

IT \*\*\*303780-23-6\*\*\* \*\*\*303780-27-0\*\*\* 356566-87-5 356566-89-7  
356566-91-1 356566-93-3 356566-95-5 356566-96-6 356566-98-8  
356567-00-5 356567-01-6  
RL: DEV (Device component use); USES (Uses)  
(dye; information recording optical disks contg. cyanine dye in recording layer)

IT 107-06-2, 1,2-Dichloroethane, uses 110-80-5, Ethyl cellosolve  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; in prepn. of information recording optical disks contg. cyanine dye in recording layer)

L5 ANSWER 7 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:586453 CAPLUS

DN 135:173037

ED Entered STN: 14 Aug 2001

TI Write-once read-many optical recording medium containing fluoroalkyl-substituted cyanine dye

IN Nagano, Hideki; Nagataki, Yoshiyuki

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26  
ICS G11B007-24; G11B007-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2001219653 | A2   | 20010814 | JP 2000-35731   | 20000214 |
| PRAI | JP 2000-35731 |      | 20000214 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2001219653 | ICM   | B41M005-26                         |
|               | ICS   | G11B007-24; G11B007-26             |

OS MARPAT 135:173037

GI

/ Structure 7 in file .gra /

AB The recording medium has a .ltoreq.150-nm recording layer contg. a fluoroalkyl-substituted cyanine dye I or II [R1, R2 = F-substituted alkyl, H, amine, alkyl, alkoxyl, alkylamine, alkylhydrazone, alkoxyl, alkylsulfate, substituted arom. ring; R- = (F-substituted) alkylsulfonyl,

(F-substituted) alkylcarboxyl, (F-substituted) alkylhydroxy; R = F-substituted alkyl; n = 0-3; Y1, Y2 = CMe2, C:C, S, O; X = halo-contg. counter ion; A1, A2 = at. group forming (substituted) arom. benzene ring], which is formed by spin-coating of its org. solvent soln. The medium shows low jitter.

ST write once read many optical disk; WORM optical recording disk fluoroalkyl cyanine dye

IT Coating process  
(spin; write-once read-many optical recording medium having spin-coated recording layer contg. fluoroalkyl-substituted cyanine dye)

IT Optical disks  
(write-once read-many optical recording medium having spin-coated recording layer contg. fluoroalkyl-substituted cyanine dye)

IT \*\*\*7696-70-0\*\*\*  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(degrdn. inhibitor; write-once read-many optical recording medium having spin-coated recording layer contg. fluoroalkyl-substituted cyanine dye)

IT 11142-89-5  
RL: DEV (Device component use); USES (Uses)  
(intermediate layer; write-once read-many optical recording medium having spin-coated recording layer contg. fluoroalkyl-substituted cyanine dye)

IT 123-42-2, 4-Hydroxy-4-methyl-2-pentanone  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent for spin coating; write-once read-many optical recording medium having spin-coated recording layer contg. fluoroalkyl-substituted cyanine dye)

IT 354141-55-2 354141-58-5 354141-60-9 354141-62-1 354141-64-3 354141-66-5  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(write-once read-many optical recording medium having spin-coated recording layer contg. fluoroalkyl-substituted cyanine dye)

L5 ANSWER 8 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:584592 CAPLUS

DN 135:290135

ED Entered STN: 14 Aug 2001

TI Novel encapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged macromolecular species

AU Dai, Zhifei; Voigt, Andreas; Donath, Edwin; Mohwald, Helmuth

CS Max Planck Institute of Colloids and Interfaces, Potsdam, D-14424, Germany

SO Macromolecular Rapid Communications (2001), 22(10), 756-762  
CODEN: MRCOE3; ISSN: 1022-1336

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

CC 41-1 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

AB A comprehensive study of the encapsulation of 11 functional dyes belonging to several chem. groups and subgroups is presented. Layer-by-layer polyelectrolyte adsorption at dye crystal surfaces as well as the removal of the crystal core to obtain semipermeable multilayer microcapsules is conducted. Dye crystals are alternately coated by poly(allylamine hydrochloride), Na poly(styrenesulfonate) (PSS), and poly(diallyldimethylammonium chloride) using a combination of electrostatic, hydrophobic, and van der Waals interactions. It is remarkable that the uncharged org. crystals have successfully been coated with PSS without using any amphiphile. The introduction of a water-sol. shell on a functional dye crystal may be of importance in various technologies. We characterized the prepd. multilayers at the particle surface or in the microcapsule (shell) by scanning force microscopy and confocal laser scanning microscopy.

ST polyelectrolyte microencapsulation dye

IT Polyelectrolytes  
(anionic; microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT Polyelectrolytes

(cationic; microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT Cyanine dyes  
Dyes  
(microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT Encapsulation  
(microencapsulation; microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT 99-98-9, N,N-Dimethyl-p-phenylenediamine 104-91-6, 4-Nitrosophenol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(dye starting material; microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT \*\*\*7696-70-0P\*\*\*  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(dye; microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT 19542-80-4 27333-50-2 31183-11-6 39001-65-5 71115-95-2D, derivs.  
99837-92-0 102185-03-5 130902-58-8 131443-20-4 173443-19-1  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(dye; microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

IT 9080-79-9, Sodium poly(styrenesulfonate) 26062-79-3,  
Poly(diallyldimethylammonium chloride) 71550-12-4, Poly(allylamine hydrochloride)  
RL: TEM (Technical or engineered material use); USES (Uses)  
(microencapsulated functional dye particles based on alternately adsorbed multilayers of active oppositely charged polyelectrolytes)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Caruso, F; Langmuir 2000, V16, P8932 CAPLUS
- (2) Dai, Z; Chem Phys Lett 2000, V317, P9 CAPLUS
- (3) Dai, Z; Dyes Pigm 1997, V35, P23 CAPLUS
- (4) Dai, Z; Dyes Pigm 1998, V36, P169 CAPLUS
- (5) Dai, Z; Dyes Pigm 1998, V36, P243 CAPLUS
- (6) Donath, E; Angew Chem Int Ed Engl 1998, V37, P2202 CAPLUS
- (7) Kaschak, D; J Am Chem Soc 1996, V118, P4222 CAPLUS
- (8) Kaschak, D; J Am Chem Soc 1999, V121, P3435 CAPLUS
- (9) Liu, E; Acta Biochim Sin 1998, V30, P31 CAPLUS
- (10) Nazeeruddin, M; Inorg Synthesis 1998, V31, P181
- (11) O'Regan, B; Nature 1991, V353, P737 CAPLUS
- (12) Sukhorukov, G; Adv Mater 2000, V12, P112 CAPLUS
- (13) Sukhorukov, G; Polym Adv Technol 1998, V9, P759 CAPLUS
- (14) Tao, J; J Am Chem Soc 1999, V121, P3475 CAPLUS
- (15) Voigt, A; Ind Eng Chem Res 1999, V38, P4037 CAPLUS
- (16) Wright, J; Molecular Crystals 1995
- (17) Zollinger, H; Science and Technology of Photography 1993

L5 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:463133 CAPLUS

DN 135:68629

ED Entered STN: 27 Jun 2001

TI Recordable optical recording media using cyanine dyes

IN Nagano, Hideki; Nagataki, Yoshiyuki

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2001171232  | A2   | 20010626 | JP 1999-355089  | 19991214 |
| PRAI | JP 1999-355089 |      | 19991214 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2001171232 | ICM   | B41M005-26                         |
|               | ICS   | G11B007-24                         |

OS MARPAT 135:68629  
GI

/ Structure 8 in file .gra /

AB The recording media have recording layers contg. cyanine dyes I [one of R1 and R2 is F-substituted alkyl and the other is F-unsubstituted C.ltoreq.5 alkyl or R1 and R2 are F-substituted alkyls having different C no.; n = 1-3; Z = alkyl, halo; Y, Y1 = CMe2, CH:CH, S, O; X- = halogen ion, anion of halogen compd.; A = at. group required to form (un)substituted benzene group]. The recording media are obtained by rapid spin-coating because of high soly. of the dyes in glycol ethers.

ST optical recording cyanine dye glycol ether soly; fluorinated cyanine dye optical disk

IT Cyanine dyes  
(fluorinated; recordable optical recording media using fluorinated cyanine dyes with high soly. in glycol ethers)

IT Erasable optical disks  
Optical recording materials  
(recordable optical recording media using fluorinated cyanine dyes with high soly. in glycol ethers)

IT \*\*\*7696-70-0\*\*\*  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(deterioration inhibitors; recordable optical recording media using fluorinated cyanine dyes with high soly. in glycol ethers)

IT 113527-53-0, gold 5, silver 95 (atomic)  
RL: DEV (Device component use); USES (Uses)  
(intermediate layers; recordable optical recording media using fluorinated cyanine dyes with high soly. in glycol ethers)

IT 345959-98-0 345959-99-1 345960-01-2 345960-03-4  
RL: DEV (Device component use); USES (Uses)  
(recordable optical recording media using fluorinated cyanine dyes with high soly. in glycol ethers)

IT 1320-67-8  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvents; recordable optical recording media using fluorinated cyanine dyes with high soly. in glycol ethers)

L5 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:403320 CAPLUS

DN 135:26944

ED Entered STN: 05 Jun 2001

TI Optical recording materials having azo compound layers for DVD-R

IN Takasawa, Koji; Sakurai, Tomoichi; Ito, Mitsuru; Nagataki, Yoshiyuki

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26  
ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2001150815  | A2   | 20010605 | JP 1999-341149  | 19991130 |
| PRAI | JP 1999-341149 |      | 19991130 |                 |          |

CLASS



| PATENT NO.    | CLASS  | PATENT FAMILY CLASSIFICATION CODES |             |             |             |
|---------------|--|------------------------------------|-------------|-------------|-------------|
| JP 2001150815 | ICM<br>ICS   | B41M005-26<br>G11B007-24           |             |             |             |
| AB            | In the recording materials having substrates, recording layers, and reflective layers, the recording layers contain azo compds. showing maximal absorpction at 500-620 nm and IR absorbers. The materials show good light resistance and high modulation for 620-690-nm laser light. |                                    |             |             |             |
| ST            | optical recording azo dye light resistance; IR absorber optical recording light resistance; DVD optical recording azo dye light resistance   |                                    |             |             |             |
| IT            | Optical materials<br>(IR absorbers; light-resistant optical recording materials having azo compd. layers contg. IR absorbers for DVD-R)  |                                    |             |             |             |
| IT            | IR materials<br>(absorbers; light-resistant optical recording materials having azo compd. layers contg. IR absorbers for DVD-R)  |                                    |             |             |             |
| IT            | Azo dyes<br>Erasable optical disks<br>Optical recording materials<br>(light-resistant optical recording materials having azo compd. layers contg. IR absorbers for DVD-R)  |                                    |             |             |             |
| IT            | 4379-85-5  | ***7696-70-0***                    | 51449-18-4  | 96122-07-5  | 106152-89-0 |
|               | 152340-26-6  |                                    |             |             |             |
|               | RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)<br>(IR absorbers; light-resistant optical recording materials having azo compd. layers contg. IR absorbers for DVD-R)  |                                    |             |             |             |
| IT            | 199665-43-5  | 208340-30-1                        | 333754-16-8 | 342790-11-8 |             |
|               | RL: DEV (Device component use); USES (Uses)<br>(light-resistant optical recording materials having azo compd. layers contg. IR absorbers for DVD-R)  |                                    |             |             |             |

L5 ANSWER 11 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 2001:261119 CAPLUS  
DN 134:267730  
ED Entered STN: 13 Apr 2001  
TI Unsymmetrical indolenin pentamethine cyanine dyes used in high-speed-recordable-type optical recording media  
IN Hohsaka, Ayako; Matsuura, Dai; Kawata, Toshio; Yasui, Shigeo  
PA Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Japan  
SO Eur. Pat. Appl., 26 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM C09B023-08  
ICS B41M005-40; G11B007-24  
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 27, 74

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | EP 1090961  | A1   | 20010411 | EP 2000-308768  | 20001005 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO |      |          |                 |          |
|      | JP 2001323179   | A2   | 20011120 | JP 2000-275764  | 20000912 |
| PRAI | JP 1999-285123  | A    | 19991006 |                 |          |
|      | JP 2000-62572   | A    | 20000307 |                 |          |
|      | JP 2000-275764  | A    | 20000912 |                 |          |

# CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
| EP 1090961 | ICM   | C09B023-08                         |
|            | ICS   | B41M005-40; G11B007-24             |
| EP 1090961 | ECLA  | C09B023/08B; G11B007/247           |

OS MARPAT 134:267730

AB The title dyes are synthesized by reacting 3,3-dimethylindolenium compds. having an active Me group with 2-(1,3-butadienyl)-3,3-dimethyl indolenium compds. having an appropriate leaving group. When formed into a thin layer, these cyanine dyes are sensitive to laser beams with wavelengths of 850 nm or shorter, which can be used as a light absorbent in many fields.

The cyanine dyes are found to exert excellent recording features when used in high-speed-recordable-type optical recording media.

ST Unsym indolenin cyanine dye optical recording media

IT Cyanine dyes  
Differential thermal analysis  
Light stabilizers  
Optical ROM disks  
Thermogravimetric analysis  
(Unsym. indolenin pentamethine cyanine dyes)

IT Polycarbonates, uses  
RL: DEV (Device component use); USES (Uses)  
(Unsym. indolenin pentamethine cyanine dyes)

IT Optical recording materials  
(Unsym. indolenin pentamethine cyanine dyes for)

IT 331842-08-1P 331842-24-1P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(Unsym. indolenin pentamethine cyanine dyes)

IT 206451-14-1 331842-02-5 331842-05-8 331842-14-9 331842-17-2  
331842-21-8 331842-22-9 331842-26-3  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(Unsym. indolenin pentamethine cyanine dyes)

IT 34503-94-1 329965-04-0 331842-42-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Unsym. indolenin pentamethine cyanine dyes)

IT \*\*\*7696-70-0\*\*\* 331841-93-1 331841-96-4 331841-98-6 331842-00-3  
331842-11-6 331842-19-4 331842-28-5 331842-30-9 331842-32-1  
331842-34-3 331842-36-5 331842-38-7 331842-40-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Unsym. indolenin pentamethine cyanine dyes)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; PATENT ABSTRACTS OF JAPAN 1995, V1995(05)  
(2) Anon; PATENT ABSTRACTS OF JAPAN 1998, V1998(08)  
(3) Anon; PATENT ABSTRACTS OF JAPAN 1999, V1999(13)  
(4) Hiltachi Maxell Ltd; JP 11227331 A 1999 CAPLUS  
(5) Konica Corp; JP 07047769 A 1995 CAPLUS  
(6) Namba, K; US 5154958 A 1992  
(7) Taiyo Yuden Co Ltd; JP 10081068 A 1998 CAPLUS  
(8) Tdk Corp; EP 0905202 A 1999 CAPLUS

L5 ANSWER 12 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:242344 CAPLUS

DN 135:53441

ED Entered STN: 06 Apr 2001

TI Synthesis and property of IR absorbing agents for CTP preparation

AU Wang, Yan; Wang, Hua; Yao, Zu-Guang

CS Research Institute of Fine Chemicals, East China University of Science and Technology, Shanghai, 200237, Peop. Rep. China

SO Yingyong Huaxue (2001), 18(3), 216-219  
CODEN: YIHUED; ISSN: 1000-0518

PB Yingyong Huaxue Bianji Weiyuanhui

DT Journal

LA Chinese

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 41, 73

AB Four cyanine-dye IR absorbing agents used in CTP (Computer-to-Plate) prepn. were synthesized. Their structures and purity were confirmed by IR, 1H NMR and HPLC. Their electronic absorption spectra, solubilities, photostability and sensitizing properties were studied.

ST cyanine dye IR absorber printing plate

IT Optical materials  
(IR absorbers; Synthesis and property of IR absorbing agents for CTP prepn.)

IT Cyanine dyes  
IR spectra  
NMR (nuclear magnetic resonance)  
Solubility  
(Synthesis and property of IR absorbing agents for CTP prepn.)

IT IR materials  
(absorbers; Synthesis and property of IR absorbing agents for CTP  
prepn.)

IT Printing plates  
(computer-to-plate; Synthesis and property of IR absorbing agents for  
CTP prep.)

IT Oxidation kinetics  
(photooxidn.; Synthesis and property of IR absorbing agents for CTP  
prepn.)

IT 134127-48-3P 201024-57-9P 344940-21-2P 344940-22-3P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(Synthesis and property of IR absorbing agents for CTP prep.)

IT 80-48-8 563-80-4 2243-58-5 5608-83-3 61010-04-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(Synthesis and property of IR absorbing agents for CTP prep.)

IT 41532-84-7P \*\*\*141914-99-0P\*\*\*  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(Synthesis and property of IR absorbing agents for CTP prep.)

L5 ANSWER 13 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:208364 CAPLUS

DN 134:245285

ED Entered STN: 22 Mar 2001

TI Styryl dye for optical recording medium

IN Kasada, Chiaki; Dan-oh, Yasufumi; Kawata, Toshio; Yasui, Shigeo

PA Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo, Japan

SO PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C09B023-14

ICS B41M005-26

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 41

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | WO 2001019923  | A1   | 20010322 | WO 2000-JP6312  | 20000914 |
|      | W: JP, KR, US  |      |          |                 |          |
|      | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |          |
|      | EP 1130063   | A1   | 20010905 | EP 2000-961022  | 20000914 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI  |      |          |                 |          |
| PRAI | JP 1999-259857   | A    | 19990914 |                 |          |
|      | JP 2000-143035   | A    | 20000516 |                 |          |
|      | WO 2000-JP6312   | W    | 20000914 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES    |
|---------------|-------|---------------------------------------|
| WO 2001019923 | ICM   | C09B023-14                            |
|               | ICS   | B41M005-26                            |
| WO 2001019923 | ECLA  | C09B023/14H; G11B007/247; G11B007/249 |
| EP 1130063    | ECLA  | C09B023/14H; G11B007/247; G11B007/249 |

OS MARPAT 134:245285

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to a styryl dye which imparts satisfactory recording properties to an optical recording medium for high-d. recording; and uses thereof. The dye is a dimethine type styryl dye represented by I, II, or III (R1 = aliph. hydrocarbon; R2, R3 = aliph. hydrocarbon, arom. hydrocarbon; R4, R5 = H, substituent; X- = counter ion; R6, R7 = aliph. hydrocarbon, alicyclic hydrocarbon). A light absorber and an optical recording medium are provided which contain the dimethine type styryl dye.

Also provided is a process in which the dimethine type styryl dye is produced through the step of reacting an arom. amine compd. having an aldehyde group with either a 3,3-dimethylbenzoindolium compd. having an active Me group or a 3,3-dimethylindolium compd. having an aminosulfonyl group.

ST styryl dye prepn optical recording medium

IT Cyanine dyes

Optical disks

Optical recording materials

(styryl dye suitable for optical recording medium)

IT 329965-12-0 329965-13-1

RL: MOA (Modifier or additive use); USES (Uses)

(additive together with styryl dye in optical recording medium)

IT 100-10-7, p-N,N-Dimethylaminobenzaldehyde \*\*\*145038-07-9\*\*\*

329965-04-0 330442-55-2 330442-57-4 330442-58-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of styryl dye suitable for optical recording medium)

IT 329965-10-8P

RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(styryl dye suitable for optical recording medium)

IT 329965-05-1

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(styryl dye suitable for optical recording medium)

IT 329965-07-3P 330442-49-4P 330442-51-8P 330442-53-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(styryl dye suitable for optical recording medium)

IT 329965-08-4 330442-48-3 330442-52-9

RL: TEM (Technical or engineered material use); USES (Uses)

(styryl dye suitable for optical recording medium)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Eastman Kodak Company; DE 2840634 A1 CAPLUS
- (2) Eastman Kodak Company; JP 54-56818 A CAPLUS
- (3) Eastman Kodak Company; GB 2004380 A 1978 CAPLUS
- (4) Fuji Photo Film Co Ltd; US 3996215 A CAPLUS
- (5) Fuji Photo Film Co Ltd; JP 50-59418 A CAPLUS
- (6) Fuji Photo Film Co Ltd; GB 1466440 A 1974 CAPLUS
- (7) Matsushita Electric Ind Co Ltd; JP 02179617 A 1990 CAPLUS
- (8) Sandoz Ltd; DE 2200027 A1 CAPLUS
- (9) Sandoz Ltd; US 3957767 A CAPLUS
- (10) Sandoz Ltd; GB 1372622 A 1972 CAPLUS

L5 ANSWER 14 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:408705 CAPLUS

DN 133:51290

ED Entered STN: 20 Jun 2000

TI Optical recording material compositions and recording media thereof

IN Hamada, Rieko; Tomita, Atsuo; Yano, Toru; Negishi, Yoshinori

PA Asahi Denka Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

| PATENT NO.          | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------------|------|----------|-----------------|----------|
| JP 2000168233       | A2   | 20000620 | JP 1998-346021  | 19981204 |
| PRAI JP 1998-346021 |      | 19981204 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| JP 2000168233 | ICM   | B41M005-26                         |
|               | ICS   | G11B007-24                         |

OS MARPAT 133:51290

AB The compns. contain optical recording colorants such as indolenin-type cyanine compds., compds. bearing 1-oxyl-2,2,6,6-tetramethylpiperidyl group as light stabilizers, and optionally quenchers. The recording media with thin-film recording layers of the compns. exhibit excellent light stability.

ST laser optical recording media light stabilizer; piperidine oxyl methyl light stabilizer optical recording; indolenin cyanine dye optical recording media

IT Light stabilizers  
Optical recording materials  
(optical recording material compns. contg. piperidine-type light stabilizers and recording media thereof)

IT 220915-09-3 263562-13-6 275822-66-7 275822-68-9 275822-69-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(colorant; optical recording material compns. contg. piperidine-type light stabilizers and recording media thereof)

IT 2226-96-2 2734-44-3 6599-87-7 36010-81-8 66569-11-7 78649-07-7 98238-24-5 275822-70-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(optical recording material compns. contg. piperidine-type light stabilizers and recording media thereof)

IT \*\*\*7696-70-0\*\*\* 12082-04-1 47883-84-1 87314-11-2 276248-20-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(quencher; optical recording material compns. contg. piperidine-type light stabilizers and recording media thereof)

L5 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:780998 CAPLUS

DN 132:28663

ED Entered STN: 10 Dec 1999

TI Positively-working image-forming material

IN Nakamura, Tatsuo; Kunita, Kazuto

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 49 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-039

ICS B41N001-14; G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 11338146    | A2   | 19991210 | JP 1998-147227  | 19980528 |
| PRAI | JP 1998-147227 |      | 19980528 |                 |          |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
|------------|-------|------------------------------------|

|             |     |                         |
|-------------|-----|-------------------------|
| JP 11338146 | ICM | G03F007-039             |
|             | ICS | B41N001-14; G03F007-004 |

AB The title material contains a polymerizable onium salt and a polymer insol. in water and sol. in aq. alkali. The material, suitable for use in prodn. of lithog. plate materials capable of direct platemaking, shows improved photosensitivity and development latitude.

ST pos working photoresist lithog plate; photoimaging material photopolymerizable onium salt; water insol polymer pos working photoresist; aq alkali sol polymer photoresist

IT Phenolic resins, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(novolak; pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer)

IT Lithographic plates

Positive photoresists

(pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer)

IT Quaternary ammonium compounds, uses

Sulfonium compounds

RL: TEM (Technical or engineered material use); USES (Uses)

(pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer)

IT 53810-96-1P 252055-65-5P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (intermediate; pos.-working photoresist contg. water-insol. and aq. alkali-sol. polymer and polymerizable onium salt from)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer from)

IT 9016-83-5P, Formaldehyde-cresol copolymer 55187-06-9P 124996-93-6P  
 252055-45-1P 252055-54-2P 252055-59-7P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer)

IT 201683-64-9 201683-93-4 252055-47-3 252055-49-5 252055-53-1  
 252055-55-3 252055-56-4 252055-58-6 252055-60-0 252055-61-1  
 252055-63-3 252055-64-4  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer)

IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, reactions 541-41-3, Ethyl chloroformate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (pos.-working photoresist contg. polymerizable onium salt and water-insol. and aq. alkali-sol. polymer from)

IT 106-95-6, reactions 121-44-8, reactions 825-90-1 1073-67-2  
 2695-37-6 41532-84-7 61010-04-6 \*\*\*141914-99-0\*\*\* 180574-69-0  
 252055-66-6 252055-67-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (pos.-working photoresist contg. water-insol. and aq. alkali-sol. polymer and polymerizable onium salt from)

L5 ANSWER 16 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:648639 CAPLUS

DN 131:264850

ED Entered STN: 12 Oct 1999

TI Optical recording material

IN Nagano, Hideki; Nagataki, Yoshiyuki

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS C09B023-00; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 11277904   | A2   | 19991012 | JP 1998-99829   | 19980330 |
| PRAI | JP 1998-99829 |      | 19980330 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|------------------------------------|
| JP 11277904 | ICM   | B41M005-26                         |
|             | ICS   | C09B023-00; G11B007-24             |

OS MARPAT 131:264850

GI

/ Structure 9 in file .gra /

AB The title recording material has a cyanine dye-contg. recording layer which contains a nitroso compd. and an aminium salt I and II (R = alkyl, arom. hydrocarbon, H; X- = org. anion, halo, metal complex anion; n = 1,2)

as anti-deteriorating agent of the cyanine dye. The invention recording material shows good recording property and can keep the reflectivity for a long time.

ST optical recording material antideteriorating agent; cyanine dye  
antideteriorating agent recording material; nitroso aminium compd  
antideteriorating agent

IT Cyanine dyes  
Optical recording materials  
(optical recording material contg. nitroso compd. and aminium salt as anti-deteriorating agent of cyanine dye)

IT Nitroso compounds  
RL: MOA (Modifier or additive use); USES (Uses)  
(optical recording material contg. nitroso compd. and aminium salt as anti-deteriorating agent of cyanine dye)

IT Optical ROM disks  
(write-once; optical recording material contg. nitroso compd. and aminium salt as anti-deteriorating agent of cyanine dye)

IT \*\*\*7696-70-0\*\*\* 88358-74-1  
RL: MOA (Modifier or additive use); USES (Uses)  
(optical recording material contg. cyanine dye and nitroso compd. and aminium salt as anti-deteriorating agent of cyanine dye)

IT 54389-98-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(optical recording material contg. cyanine dye and nitroso compd. and aminium salt as anti-deteriorating agent of cyanine dye)

L5 ANSWER 17 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 1999:530646 CAPLUS  
DN 131:191926  
ED Entered STN: 25 Aug 1999  
TI Optical read/write recoding medium having cyanine organic dyes  
IN Nagano, Hideki; Nagataki, Yoshiyuki; Ohara, Hiroshi; Iuchi, Shinichiro  
PA Hitachi Maxell, Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM B41M005-26  
ICS C09B023-00; G11B007-24  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 11227331   | A2   | 19990824 | JP 1998-29986   | 19980212 |
| PRAI | JP 1998-29986 |      | 19980212 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|------------------------------------|
| JP 11227331 | ICM   | B41M005-26                         |
|             | ICS   | C09B023-00; G11B007-24             |

OS MARPAT 131:191926

GI

/ Structure 10 in file .gra /

AB The optical read/write recoding medium has a recording layer having cyanine org. dyes on a substrate, wherein the cyanines org. dye have structures I(Y = benzene ring; Z= naphthalene ring; R1-6 = H, alkyl, alkoxy, alkyl hydroxy, etc.) and II(Z= naphthalene ring; R1-6 = H, alkyl, alkoxy, alkyl hydroxy, etc.), wherein the recording layer contains .ltoreq.30% of the cyanine org. dye II. The optical recording medium provides a wide bit pattern and wide laser power margin and shows the excellent light-resistance and the long shelf-life.

ST optical read write recoding medium cyanine org dye  
IT Optical recording materials  
(optical read/write recoding medium having cyanines org. dye)

IT \*\*\*7696-70-0\*\*\* 88358-74-1 121458-91-1 139562-87-1 162023-06-5

240122-19-4 240122-21-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(cyanines org. dye for optical read/write recoding medium)

L5 ANSWER 18 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:42556 CAPLUS

DN 130:102883

ED Entered STN: 21 Jan 1999

TI Near IR-sensitive photoimageable/photopolymerizable compositions

IN Weed, Gregory Charles; Fabricius, Dietrich Max

PA E. I. Du Pont de Nemours & Co., USA

SO Eur. Pat. Appl., 32 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G03F007-031

ICS G03C001-73; B41M005-36

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | EP 889363  | A1   | 19990107 | EP 1998-100692  | 19980116 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |      |          |                 |          |
|      | AU 746399  | B2   | 20020502 | AU 1998-52167   | 19980120 |
|      | AU 9852167   | A1   | 19990812 |                 |          |
|      | JP 11149154  | A2   | 19990602 | JP 1998-91870   | 19980403 |
|      | US 2002064728  | A1   | 20020530 | US 2001-775988  | 20010202 |
|      | US 2004191681  | A1   | 20040930 | US 2004-819820  | 20040407 |
|      | US 6861201   | B2   | 20050301 |                 |          |
| PRAI | US 1996-708476   | A    | 19960905 |                 |          |
|      | US 1997-888242   | A    | 19970703 |                 |          |
|      | US 2001-775988   | A1   | 20010202 |                 |          |

CLASS

| PATENT NO.    | CLASS | PATENT FAMILY CLASSIFICATION CODES  |
|---------------|-------|---|
| EP 889363     | ICM   | G03F007-031   |
|               | ICS   | G03C001-73; B41M005-36  |
| EP 889363     | ECLA  | B41M005/30; G03F007/031; B41M005/36S; G03C001/73L;<br>G03F003/10  |
| US 2002064728 | NCL   | 430/281.100   |
|               | ECLA  | B41M005/30; B41M005/36S; G03C001/73L; G03F003/10;<br>G03F007/031  |
| US 2004191681 | NCL   | 430/285.100; 430/281.100; 430/288.100; 430/339.000;<br>430/343.000; 430/915.000; 430/920.000; 522/026.000 |
|               | ECLA  | B41M005/30; B41M005/36S; G03C001/73L; G03F003/10;<br>G03F007/031  |

OS MARPAT 130:102883

AB Novel photoimageable/photopolymerizable compns. are disclosed which contain dyes that absorb strongly in the near IR regions. These dyes are useful as photosensitizers for initiating a variety of photoimaging and photopolymn. reactions. Imaging media are disclosed herein which are sensitive in the near IR regions and which can initiate polymn. of ethylenically unsatd. monomer components in neg.-acting photopolymer systems and/or which can initiate conversion of leuco dyes to their corresponding colored dye form. These imaging media comprise either a near IR dye photochem. sensitizer, a hexaarylbiimidazole photoinitiator, a chain transfer agent, and a photopolymerizable material. These imaging media are useful in a variety of photopolymer products, including photoresists, proofing films, and holog. recording films.

ST photopolymerizable photoimaging compn near IR; neg photoresist  
photopolymerizable near IR; holog recording near IR photopolymerizable compn

IT Photoimaging materials

(near IR; photopolymerizable compns. contg. IR dyes, hexaarylbiimidazoles, chain transfer agents, and ethylenically unsatd. compds. as)

IT Photoresists

(photopolymerizable compns. contg. IR dyes, hexaarylbiimidazoles, chain



transfer agents, and ethylenically unsatd. compds. as)

IT Holography  
(photopolymerizable compns. contg. IR dyes, hexaarylbiimidazoles, chain transfer agents, and ethylenically unsatd. compds. for)

IT Printing plates  
(photopolymerizable compns. contg. IR dyes, hexaarylbiimidazoles, chain transfer agents, and ethylenically unsatd. compds. for color proofs for)

IT 55281-19-1 116188-88-6 219537-63-0 219537-64-1 219537-65-2  
219537-67-4 219537-69-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR photosensitizer for photopolymerizable photoimaging compns.)

IT 103-01-5, N-Phenylglycine 128-37-0, Butylated hydroxytoluene, uses  
479-59-4, Julolidine 868-77-9 1707-68-2 9003-17-2 9003-55-8,  
Butadiene-styrene copolymer 13048-33-4 15625-89-5, Trimethylolpropane triacrylate 25133-97-5, Ethyl acrylate-methacrylic acid-methyl methacrylate copolymer 28961-43-5, Ethoxylated trimethylolpropane triacrylate 34122-40-2, 1,4,4-Trimethyl-2,3-diazabicyclo[3.2.2]non-2-ene-2,3-dioxide 154482-21-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(near IR-sensitive photopolymerizable photoimaging compns. contg.)

IT 14134-81-7P 42952-29-4P 61224-41-7P \*\*\*141914-99-0P\*\*\*  
219537-50-5P 219537-51-6P 219537-56-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(prepn. and reaction in prepg. IR photosensitizers for photopolymerizable photoimaging compns.)

IT 100498-66-6P 219537-49-2P 219537-52-7P 219537-55-0P 219537-57-2P  
219537-58-3P 219537-60-7P 219537-61-8P 259133-57-8P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(prepn. and use as photosensitizer for photopolymerizable photoimaging compns.)

IT 74-89-5, Methylamine, reactions 75-03-6, Iodoethane 80-40-0, Ethyl tosylate 80-48-8, Methyl tosylate 120-92-3, Cyclopentanone 769-42-6, 1,3-Dimethylbarbituric acid 1640-39-7 2213-63-0, 2,3-Dichloroquinoxaline 2682-45-3, 2-Methylnaphtho[1,2-d]thiazole 3119-93-5, 3-Ethyl-2-methylbenzothiazolium iodide 6780-49-0, Ethyl isoformanilide 20048-92-4 76328-38-6, 3-Ethyl-6-methoxy-2-methylbenzothiazolium iodide 219537-54-9 219537-62-9  
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(reaction in prepg. IR photosensitizers for photopolymerizable photoimaging compns.)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
- (1) Du Pont; EP 0437259 A 1991 CAPLUS
  - (2) Du Pont Deutschland; DE 4240141 A 1994 CAPLUS
  - (3) Kouichi, K; US 4636459 A 1987 CAPLUS
  - (4) Mitsubishi Chem Ind; EP 0300410 A 1989 CAPLUS
  - (5) Toppan Printing Co Ltd; JP 08297364 A 1996 CAPLUS

L5 ANSWER 19 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:614006 CAPLUS

DN 129:267971

ED Entered STN: 29 Sep 1998

TI Recycling of optical disks

IN Tomita, Hidemi; Ichimura, Mari

PA Sony Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B09B003-00

ICS B01D011-02; B29B017-00; C08J011-08

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 41, 60

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|      |               |    |          |               |          |
|------|---------------|----|----------|---------------|----------|
| PI   | JP 10249315   | A2 | 19980922 | JP 1997-61544 | 19970314 |
|      | JP 3528898    | B2 | 20040524 |               |          |
| PRAI | JP 1997-61544 |    | 19970314 |               |          |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
|------------|-------|------------------------------------|

|             |     |                                    |
|-------------|-----|------------------------------------|
| JP 10249315 | ICM | B09B003-00                         |
|             | ICS | B01D011-02; B29B017-00; C08J011-08 |

AB The title recycling process involves bringing optical disks into contact with org. solvents that dissolve the dye layer of the disks to recover the dye components. The process is esp. useful for recovery of cyanine dyes and quenchers from CD-R and DVD-R without damaging polycarbonate substrates.

ST optical disk dye recycling org solvent

IT Solvents

(org.; recovery of dyes from optical disks by dissoln. with org. solvents)

IT Cyanine dyes

Optical disks

Recycling

(recovery of dyes from optical disks by dissoln. with org. solvents)

IT \*\*\*7696-70-0P\*\*\*

RL: PUR (Purification or recovery); PREP (Preparation)

(quencher; recovery of dyes from optical disks by dissoln. with org. solvents)

IT 56-81-5, Glycerin, uses 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropyl alcohol, uses 71-36-3, n-Butanol, uses 107-21-1, 1,2-Ethanediol, uses 109-86-4, Methyl cellosolve 110-80-5, Ethyl cellosolve 115-22-0 123-42-2, Diacetone alcohol 590-90-9, 4-Hydroxy-2-butanone

RL: NUU (Other use, unclassified); USES (Uses)

(recovery of dyes from optical disks by dissoln. with org. solvents)

IT 121482-73-3P

RL: PUR (Purification or recovery); PREP (Preparation)

(recovery of dyes from optical disks by dissoln. with org. solvents)

L5 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:585928 CAPLUS

DN 129:223328

ED Entered STN: 15 Sep 1998

TI Optical recording material

IN Kanno, Toshiyuki

PA Fuji Electric Co., Ltd., Japan

SO Eur. Pat. Appl., 29 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G11B007-24

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | EP 860821   | A2   | 19980826 | EP 1998-103148  | 19980223 |
|      | EP 860821   | A3   | 19990929 |                 |          |
|      | EP 860821   | B1   | 20021127 |                 |          |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO |      |          |                 |          |
|      | JP 10291373   | A2   | 19981104 | JP 1998-42243   | 19980224 |
|      | JP 10337959   | A2   | 19981222 | JP 1998-42244   | 19980224 |
| PRAI | JP 1997-39472   | A    | 19970224 |                 |          |
|      | JP 1997-91982   | A    | 19970410 |                 |          |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
|------------|-------|------------------------------------|

|           |     |            |
|-----------|-----|------------|
| EP 860821 | ICM | G11B007-24 |
|-----------|-----|------------|

|           |      |             |
|-----------|------|-------------|
| EP 860821 | ECLA | G11B007/247 |
|-----------|------|-------------|

OS MARPAT 129:223328

GI

AB An optical recording material comprises, on a substrate having light transmission properties, an org. thin-film recording layer contg. a cyanine dye represented by the general formula I wherein R1 and R2 represent a C3-18 substituent having an unsatd. bond or one of them represents a C3-18 substituent having an unsatd. bond and the other represents an alkyl group, an aryl group, or an alkoxy group and (Y1)n and (Y2)m represent structures which are asym. to each other in the cyanine dye mol. and n and m represent an integer of 1 to 4 as a main component and a metal reflection layer and a protective layer is further provided thereon.

ST optical recording material cyanine dye

IT Optical recording materials

(contg. cyanine dye layers)

IT 4182-80-3, 1,4-Benzenediamine, N,N,N',N'-tetrakis[4-(dibutylamino)phenyl]-  
RL: TEM (Technical or engineered material use); USES (Uses)

(NIR-AM 1; optical recording materials contg. cyanine dye layers and)

IT 139562-87-1, NKX 1199

RL: TEM (Technical or engineered material use); USES (Uses)

(NKX 1199; optical recording materials contg. cyanine dye layers and)

IT \*\*\*7696-70-0\*\*\* , NKX 1549

RL: TEM (Technical or engineered material use); USES (Uses)

(NKX 1549; optical recording materials contg. cyanine dye layers and)

IT 212140-46-0 212140-48-2 212140-50-6 212140-52-8 212140-54-0

212140-56-2 212140-58-4 212140-60-8 212140-62-0 212140-66-4

212140-68-6 212140-70-0 212140-72-2 212140-74-4 212141-00-9

RL: TEM (Technical or engineered material use); USES (Uses)

(optical recording materials contg.)

IT 117526-80-4D, anionic metal complexes, ammonium salts

RL: TEM (Technical or engineered material use); USES (Uses)

(optical recording materials contg. cyanine dye layers and)

IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-22-4, Silver,  
uses 7440-32-6, Titanium, uses 7440-50-8, Copper, uses 7440-57-5,  
Gold, uses 11106-92-6

RL: TEM (Technical or engineered material use); USES (Uses)

(reflection layers for optical recording materials contg. cyanine dye layers)

L5 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:335182 CAPLUS

DN 129:47445

ED Entered STN: 04 Jun 1998

TI Write-once optical disk having light-resistant and storage-stable organic dye layer

IN Nagano, Hideki; Nagataki, Yoshiyuki

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G11B007-24

ICS B41M005-26; C09B057-00

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 10134413    | A2   | 19980522 | JP 1996-304096  | 19961030 |
| PRAI | JP 1996-304096 |      | 19961030 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|------------------------------------|
| JP 10134413 | ICM   | G11B007-24                         |
|             | ICS   | B41M005-26; C09B057-00             |

GI

AB The disk has a recording layer contg. an org. dye, a nitrosodiphenylamine deriv., preferably NO-1,4-C6H4-NHC6H4R2 (R2 = alkyl, anil (sic), dialkylamino, H, halo) and a bisphenyldithiol complex, preferably I (R1 = alkyl, anil, dialkylamino, H, halo; M = transition metal). The added compds. improves light resistance of cyanine-based org. dyes in the disk.

ST write once optical disk light resistance; nitrosodiphenylamine optical disk cyanine dye; bisphenyl dithiol optical disk cyanine dye

IT Optical disks  
(write-once optical disk contg. nitrosodiphenylamine and bisphenyldithiol showing improved light resistance and storage stability)

IT 139562-87-1  
RL: DEV (Device component use); USES (Uses)  
(write-once optical disk contg. nitrosodiphenylamine and bisphenyldithiol showing improved light resistance and storage stability)

IT \*\*\*7696-70-0\*\*\* 138248-60-9  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(write-once optical disk contg. nitrosodiphenylamine and bisphenyldithiol showing improved light resistance and storage stability)

L5 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:178195 CAPLUS

DN 128:288341

ED Entered STN: 26 Mar 1998

TI Information recording medium containing cyanine dye compounds

IN Wariishi, Koji; Inakaki, Yoshio

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 26 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26  
ICS C09B023-00; G11B007-24; C07D209-58; C07D215-12; C07D235-20;  
C07D263-56; C07D277-64; C07D401-14; C07D403-14; C07D413-14;  
C07D417-14; C07D487-04

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 10071766    | A2   | 19980317 | JP 1996-245732  | 19960828 |
| PRAI | JP 1996-185563 | A    | 19960625 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES   |
|-------------|-------|--|
| JP 10071766 | ICM   | B41M005-26   |
|             | ICS   | C09B023-00; G11B007-24; C07D209-58; C07D215-12;<br>C07D235-20; C07D263-56; C07D277-64; C07D401-14;<br>C07D403-14; C07D413-14; C07D417-14; C07D487-04 |

OS MARPAT 128:288341

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB In an information recording medium with a recording layer, to which information can be recorded by laser light, and a metal reflective layer formed on a support, said recording layer contains a cyanine dye represented by formula [I; R11, R12 = (un)substituted alkyl; Z11 = a group of atoms necessary to form a (un)substituted 5- to 6-membered ring together with N+:C; Z12 = a group of atoms necessary to form a (un)substituted 5- to 6-membered ring together with C-N; Y11 = substituted

Ph, (un)substituted heterocyclcyl; Xn- = an anion; n = 1-3] (prepn. given). This recording medium is writable by laser light of high energy d. and the use of dyes I markedly improves photostability while maintaining high degree of modulation and high reflectivity. Thus, (4-chlorophenyl)malonaldehyde and benzoindolinium tosylate (II) were stirred at room temp. for 2 h to give, after salt exchange with Bu<sub>4</sub>N+ClO<sub>4</sub>-, the cyanine dye (III). A recording medium with a recording layer formed by spin-coating a soln. of III in HCF<sub>2</sub>CF<sub>2</sub>OH on a polycarbonate substrate, a Au metal reflective layer, and a protective layer showed degree of modulation 0.405 and 0.601 for recording and regenerating 3T and 11T EFM signals, resp., and reflectivity 77.5% at optimum recording power using semiconductor laser (780 nm wavelength) after irradiating with a Xe lamp for 8 h, compared to 0.415, 0.605, and 77.0%, resp., before irradiating with a Xe lamp.

ST cyanine dye prepn laser recording medium; improved photostability  
IT Cyanine dyes  
Optical recording materials

(information recording medium contg. cyanine dyes for improved photostability)

IT 40071-07-6 51076-46-1 \*\*\*141914-99-0\*\*\* 205676-17-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(information recording medium contg. cyanine dyes for improved photostability)

IT 202351-42-6P 205676-06-8P 205676-14-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(information recording medium contg. cyanine dyes for improved photostability)

IT 88358-74-1 135015-43-9 205676-08-0 205676-10-4 205676-12-6  
205676-16-0

RL: TEM (Technical or engineered material use); USES (Uses)

(information recording medium contg. cyanine dyes for improved photostability)

L5 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:164998 CAPLUS

DN 126:164322

ED Entered STN: 12 Mar 1997

TI Rewritable optical recording material containing organic dye and photostabilizer

IN Fujishiro, Tokuo

PA Esu Kee Kenkyusho Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 08318674    | A2   | 19961203 | JP 1995-126812  | 19950525 |
| PRAI | JP 1995-126812 |      | 19950525 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|------------------------------------|
| JP 08318674 | ICM   | B41M005-26                         |
|             | ICS   | G11B007-24                         |

GI

/ Structure 13 in file .gra /

AB The rewritable optical recording material contains (1) a dye I (R<sub>1</sub>,2 = alkyl, aryl, aralkyl; L = 1 to 3 units of (CH=CQ); Q = H, alkyl, halo; A = C, S, Se; X = anion; Y = unsatd. C2-18 substituent; Z = H, C, C1-18 alkyl) capable of absorbing a laser beam and (2) a photostabilizer II (W = nitro, halo, hydroxy; R<sub>21</sub> = C1-4 alkyl) 5-25% relative to I in a recording film

formed on a transparent disk substrate. A metal light-reflecting film (e.g., made from Al) is formed on the recording film.

ST rewritable optical recording material org dye; photostabilizer rewritable optical recording material

IT Light stabilizers  
Optical recording materials  
(rewritable optical recording material contg. org. dye and photostabilizer)

IT Dyes  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(rewritable optical recording material contg. org. dye and photostabilizer)

IT 7429-90-5, Aluminum, uses  
RL: DEV (Device component use); USES (Uses)  
(rewritable optical recording material contg. org. dye and photostabilizer)

IT 54389-98-9 113941-09-6 121482-73-3 123494-60-0 186904-69-8 186904-70-1 186904-72-3 186904-74-5 186904-76-7  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(rewritable optical recording material contg. org. dye and photostabilizer)

IT \*\*\*7696-70-0\*\*\* 123487-04-7 186904-77-8  
RL: MOA (Modifier or additive use); USES (Uses)  
(rewritable optical recording material contg. org. dye and photostabilizer)

L5 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1994:411729 CAPLUS

DN 121:11729

ED Entered STN: 09 Jul 1994

TI Near-infrared-absorbing cyanine antihalation dyes and their preparation from Stenhouse salts

IN Fabricius, Dietrich Max; Schelhorn, Thomas

PA du Pont de Nemours, E. I., and Co., USA

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09B023-08

ICS C09B023-00; G03C001-83

CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 74

FAN.CNT 1

|      | PATENT NO.            | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-----------------------|------|----------|-----------------|----------|
| PI   | EP 591820             | A1   | 19940413 | EP 1993-115666  | 19930929 |
|      | R: BE, DE, FR, GB, IT |      |          |                 |          |
|      | JP 06202281           | A2   | 19940722 | JP 1993-249237  | 19931005 |
|      | JP 2725981            | B2   | 19980311 |                 |          |
|      | US 5397690            | A    | 19950314 | US 1994-213898  | 19940316 |
| PRAI | US 1992-956274        | A    | 19921005 |                 |          |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES    |
|------------|-------|---------------------------------------|
| EP 591820  | ICM   | C09B023-08                            |
|            | ICS   | C09B023-00; G03C001-83                |
| US 5397690 | NCL   | 430/522.000; 430/510.000; 430/517.000 |

OS MARPAT 121:11729

AB Salts of QCH:CHCH:CHC(OR):CHCH:Q1, where Q and Q1 are heterocyclic nuclei conventional for cyanine dyes, substituted with sulfoalkyl or carboxyalkyl groups on the N adjacent to the position of attachment to the polymethine chain, and R is H, C2-20 alkenyl, C6-18 aralkyl, C1-20 sulfoalkyl, C1-20 carboxyalkyl, or C2-20 acyl, can be prep'd. from a Stenhouse salt which is economical and can be prep'd. from readily available reagents. The dyes are particularly suited for use as antihalation dyes in photog. elements and do not impart deleterious properties thereto. Thus, condensation of equimolar amts. of PhNH2, PhNH2.HCl, and furaldehyde gave PhNHCH:CHCH:C(OH)CH:NPh.HCl, .lambda.max 514 nm, which reacted with

1,3,3-trimethyl-2-methyleneindolenine and Ac2O to give a red-violet cyanine dye,  $\lambda_{\text{max}}$  740 nm in soln. and 755 nm in a photog. film.

ST photog antihalation cyanine dye

IT Photographic emulsions  
(antihalation dyes for, prepn. and use of tricarbocyanines as)

IT 563-80-4, 3-Methyl-2-butanone  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclocondensation of, with hydrazinobenzoic acid)

IT 619-67-0, 4-Hydrazinobenzoic acid 3471-32-7, 4-Methoxyphenylhydrazine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(cyclocondensation of, with methylbutanone)

IT 54136-26-4P 54136-27-5P 63149-24-6P, 1,1,2-Trimethyl-3-(4-sulfobutyl)-1H-benz[e]indolium hydroxide, inner salt 82130-35-6P 128814-41-5P  
\*\*\*141914-99-0P\*\*\* 154160-07-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction of, in cyanine dye synthesis)

IT 31241-19-7P, 5-Methoxy-2,3,3-trimethylindolenine 84100-84-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction with butane sultone)

IT 155795-15-6P 155795-17-8P 155795-18-9P 155795-20-3P 155795-22-5P  
155795-23-6P 155795-25-8P 155795-27-0P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, as antihalation dye)

IT 41532-84-7, 1,1,2-Trimethyl-1H-benz[e]indole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(quaternization of)

IT 155795-28-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in cyanine dye synthesis)

IT 98-01-1, Furaldehyde, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aniline)

IT 1640-39-7, 2,3,3-Trimethylindole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with butane sultone)

IT 62-53-3, Aniline, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with furaldehyde)

IT 1633-83-6, 1,4-Butanesultone  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with indoles)

IT 118-12-7, 1,3,3-Trimethyl-2-methyleneindoline  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(sulfonation of)

L5 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1993:483037 CAPLUS

DN 119:83037

ED Entered STN: 21 Aug 1993

TI Optical recording material containing cyanine dye

IN Araki, Yasushi; Sakai, Tatsuro; Yoshizawa, Atsushi; Matsui, Fumio

PA Pioneer Electronic Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24; G11C013-04

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 05085057    | A2   | 19930406 | JP 1991-245889  | 19910925 |
|      | JP 3088510     | B2   | 20000918 |                 |          |
|      | US 5326679     | A    | 19940705 | US 1993-68577   | 19930527 |
| PRAI | JP 1991-208003 | A    | 19910820 |                 |          |
|      | JP 1991-245889 | A    | 19910925 |                 |          |
|      | US 1992-877418 | B1   | 19920430 |                 |          |

CLASS  
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES  
-----  
JP 05085057 ICM B41M005-26  
ICS G11B007-24; G11C013-04  
US 5326679 NCL 430/270.190; 346/135.100; 369/275.400; 369/284.000;  
369/288.000; 430/270.210; 430/945.000  
ECLA G11B007/244; G11B007/247  
OS MARPAT 119:83037  
GI

/ Structure 14 in file .gra /

AB In the material comprising a pregrooved high-permeable substrate coated with a light-absorbing layer and a reflective layer, the light absorbing layer contains (A) 1st cyanine-type dye with light absorption band at the region of recording or reading light, (B) 2nd cyanine-type dye with absorption band shorter than that of A and weaker light absorption at the region of recording or reading light, (C) 1st quencher which prevents the light deterioration of the cyanine dyes, and (D) 2nd quencher of diphenylamine compd. The wts. of A,B,C,and D satisfies the following equations; the wt. ratio of B/A = 1-3, C/D = 0.5-1, (C + D)/(A + B) = 0.25-0.5, and (B/A) .times. [(C + D)/(A + B)] < 1.1. A may be I (R1-2 = C1-8 alkyl; X- = counter ion), B may be II (R3-4 = C1-8 alkyl; X- = counter ion), C may be a Ni complex III (R5-8 = H, substituent), and D may be a diphenylamine R9(p-C6H4)NR11(p-C6H4)R10 [R9-11 = H, NO, (substituted) amino, (substituted) aryl]. The material has small jitter, durability in repeated reading, and lightfastness.

ST optical recording material cyanine dye; quencher nickel complex optical recording; diphenylamine quencher opticals recording

IT Recording materials  
(optical, contg. cyanine dyes and nickel complex and diphenylamine as quencher)

IT 53213-98-2 121482-73-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(optical recording material contg.)

IT \*\*\*7696-70-0\*\*\* 139562-87-1  
RL: USES (Uses)  
(quencher, optical recording material contg.)

L5 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1993:30114 CAPLUS

DN 118:30114

ED Entered STN: 24 Jan 1993

TI Optical recording material containing cyanine dye and recording method

IN Kobayashi, Takashi; Sawano, Mitsuru; Inagaki, Yoshio; Kubo, Toshiaki

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 04175188    | A2   | 19920623 | JP 1990-231933  | 19900831 |
|      | JP 2736563     | B2   | 19980402 |                 |          |
|      | JP 10072554    | A2   | 19980317 | JP 1997-182962  | 19900831 |
| PRAI | JP 1990-197090 | A1   | 19900724 |                 |          |
|      | JP 1990-231933 | A3   | 19900831 |                 |          |

CLASS  
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES  
-----  
JP 04175188 ICM B41M005-26



OS MARPAT 118:30114  
GI

/ Structure 15 in file .gra /

AB The recording material using laser beam comprises a recording layer contg. cyanine dye having benzoindolenine skeleton I [R1-3 = (substituted) alkyl, R2 and R3 may form a ring; R4 = Me, Et, benzyl; X = anion; n = 1-3], and metal reflection layer successively on a substrate. The recording method involves rotating the recording material and irradiating the laser beam with oscillating wave length 750-850 nm from the substrate side. The recording material has high reflectivity and good recording and reading properties.

ST optical recording benzoindolenine cyanine dye

IT Recording materials

(optical, contg. cyanine dye with benzoindolenine skeleton)

IT 145056-87-7

RL: USES (Uses)

(optical recording material using)

IT 142315-00-2P 145037-97-4P 145037-99-6P 145038-01-3P

RL: PREP (Preparation)

(prepn. of, optical recording material using)

IT 10602-37-6, 1,1,3,3-Tetraethoxy-2-methylpropane

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with benzoindolium deriv.)

IT \*\*\*141914-99-0\*\*\* 145038-03-5 145038-05-7 \*\*\*145038-07-9\*\*\*

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with tetraethoxymethylpropane)

L5 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:581995 CAPLUS

DN 117:181995

ED Entered STN: 01 Nov 1992

TI Optical recording medium containing nitroso-substituted diphenylamine derivative

IN Takagishi, Yoshikazu; Otaguro, Kunihiro; Fujii, Toru; Hamada, Emiko

PA Taiyo Yuden Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS G11B007-24

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 04185381    | A2   | 19920702 | JP 1990-311387  | 19901119 |
|      | JP 2584690     | B2   | 19970226 |                 |          |
| PRAI | JP 1990-311387 |      | 19901119 |                 |          |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
|------------|-------|------------------------------------|

|             |     |            |
|-------------|-----|------------|
| JP 04185381 | ICM | B41M005-26 |
|             | ICS | G11B007-24 |

AB The title material comprises a transparent support and a layer contg. light-absorbing substance and (a) a diphenylamine deriv. substituted with .gtoreq.1 nitroso on the benzene ring and amines higher than secondary amines or (b) diphenylamines substituted with .gtoreq.1 nitroso and with .gtoreq.1 amine higher than secondary on the benzene ring, which is irradiated with light for recording. The material, e.g., a polycarbonate-supported spin-coated layer contg. cyanine dyes and 4-nitroso-4'-iododiphenylamine and IRG 003, is useful for post-writing optical recording disks.

ST optical recording disk nitroso phenylamine; cyanine dye optical recording disk; amine optical recording disk

IT Polycarbonates, uses

RL: USES (Uses)  
 (supports, for optical recording materials, nitroso-substituted  
 diphenylamines for)

IT Recording materials  
 (optical, light-absorbing layer contg. nitroso-substituted  
 dipenylamines, for post-writing)

IT 106152-89-0, IRG 003  
 RL: USES (Uses)  
 (light-absorbing layer contg. nitroso-substituted diphenylamine and,  
 for optical post-writing recording material)

IT \*\*\*7696-70-0\*\*\* 135238-76-5  
 RL: USES (Uses)  
 (light-absorbing layer contg., for optical post-writing recording  
 material)

IT 129013-92-9 131443-20-4  
 RL: USES (Uses)  
 (light-absorbing material, contg. nitroso-substituted diphenylamines,  
 for post-writing optical recording material)

L5 ANSWER 28 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1992:417381 CAPLUS  
 DN 117:17381  
 ED Entered STN: 11 Jul 1992  
 TI Information recording material and information recording  
 IN Kobayashi, Takashi; Yabe, Masao; Inagaki, Yoshio; Sawano, Mitsuru;  
 Takahashi, Yonosuke  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B41M005-26  
 ICS G11B007-24  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 03150189    | A2   | 19910626 | JP 1989-288697  | 19891108 |
| PRAI | JP 1989-288697 |      | 19891108 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|------------------------------------|
| JP 03150189 | ICM   | B41M005-26                         |
|             | ICS   | G11B007-24                         |

OS MARPAT 117:17381  
 GI

/ Structure 16 in file .gra /

AB A durable information recording material comprises a disk substrate having  
 a recording layer contg. I (R1, R2 = C1-3 alkyl; R3 = C1-4 alkyl, C1-4  
 alkoxyalkyl, C1-4 fluorinated alkyl, X = an anion) and a protective layer  
 formed on the recording layer via a metal reflective layer. A method for  
 information recording using the recording medium is also claimed.

ST cyanine dye laser recording medium

IT Recording materials  
 (optical, cyanine dyes for)

IT 54389-98-9P 121482-73-3P 137107-71-2P 137147-59-2P  
 RL: PREP (Preparation)  
 (prepn. of, for recording materials)

IT 79-10-7, Acrylic acid, reactions 16940-81-1, Hexafluorophosphoric acid  
 28140-60-5 137107-72-3 \*\*\*141914-99-0\*\*\*  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in prepn. of cyanine dye for optical recording materials)

L5 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1992:417379 CAPLUS  
 DN 117:17379

ED Entered STN: 11 Jul 1992  
TI Information recording medium and its manufacture  
IN Kobayashi, Takashi; Takazawa, Akihiro; Inagaki, Yoshio  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM B41M005-26  
ICS G11B007-24  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 03142281    | A2   | 19910618 | JP 1989-282631  | 19891030 |
|      | JP 2826846     | B2   | 19981118 |                 |          |
| PRAI | JP 1989-282631 |      | 19891030 |                 |          |

CLASS

| PATENT NO.  | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|------------------------------------|
| JP 03142281 | ICM   | B41M005-26                         |
|             | ICS   | G11B007-24                         |

OS MARPAT 117:17379

GI

/ Structure 17 in file .gra /

AB In an information recording medium having a recording layer contg. a dye compn. for laser recording, the dye compn. comprises a mixt. of I (R1, R2 = C1-3 alkyl; R3 = C1-4 alkyl, C1-4 alkoxyalkyl C1-4 fluorinated alkyl; X1 = an anion) and II (R = C1-4 alkyl; X2 = an anion). A method for manufg. the above medium is also described. A durable medium is obtained.

ST cyanine dye laser recording medium; diammonium dye laser recording medium  
IT Recording materials

(optical, disks, dyes for)

IT 88358-74-1

RL: TEM (Technical or engineered material use); USES (Uses)  
(optical recording medium contg.)

IT 54389-98-9P 121482-73-3P 137107-71-2P 137147-59-2P

RL: PREP (Preparation)  
(prepn. of, as dye for optical recording medium)

IT 7601-90-3, Perchloric acid, reactions 16940-81-1 28140-60-5  
137107-72-3 \*\*\*141914-99-0\*\*\*

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in prepn. of dye for optical recording medium)

L5 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1991:482118 CAPLUS

DN 115:82118

ED Entered STN: 23 Aug 1991

TI Light stabilizer comprising an aryl nitrogen compound and its use  
IN Ootaguro, Kunihiro; Hamada, Emiko; Takagisi, Yosikazu; Fujii, Toru  
PA Taiyo Yuden Co., Ltd., Japan

SO Eur. Pat. Appl., 28 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C08K005-16

ICS C08K005-32; C09B023-00; B41M005-26; G11B007-24

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
| PI | EP 403797  | A2   | 19901227 | EP 1990-109275  | 19900516 |
|    | EP 403797  | A3   | 19910612 |                 |          |

|                       |    |          |                 |          |
|-----------------------|----|----------|-----------------|----------|
| EP 403797             | B1 | 19951122 |                 |          |
| R: DE, ES, FR, GB, NL |    |          |                 |          |
| JP 02300287           | A2 | 19901212 | JP 1989-120537  | 19890516 |
| JP 07000782           | B4 | 19950111 |                 |          |
| JP 02300289           | A2 | 19901212 | JP 1989-120538  | 19890516 |
| JP 07000784           | B4 | 19950111 |                 |          |
| JP 02300288           | A2 | 19901212 | JP 1989-120539  | 19890516 |
| JP 07000783           | B4 | 19950111 |                 |          |
| JP 02304055           | A2 | 19901217 | JP 1989-120540  | 19890516 |
| JP 03232844           | A2 | 19911016 | JP 1990-27389   | 19900207 |
| JP 07076198           | B4 | 19950816 |                 |          |
| AU 9054566            | A1 | 19901122 | AU 1990-54566   | 19900501 |
| AU 633317             | B2 | 19930128 |                 |          |
| CA 2016195            | AA | 19901116 | CA 1990-2016195 | 19900507 |
| CA 2016195            | C  | 19980428 |                 |          |
| PRAI JP 1989-120537   | A  | 19890516 |                 |          |
| JP 1989-120538        | A  | 19890516 |                 |          |
| JP 1989-120539        | A  | 19890516 |                 |          |
| JP 1989-120540        | A  | 19890516 |                 |          |
| JP 1990-27389         | A  | 19900207 |                 |          |

# CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES             |
|------------|-------|--|
| EP 403797  | ICM   | C08K005-16                                     |
|            | ICS   | C08K005-32; C09B023-00; B41M005-26; G11B007-24 |
| EP 403797  | ECLA  | C08K005/32; G11B007/244                        |

OS MARPAT 115:82118

AB A photog. light stabilizer is described comprising an aryl N compd. contg. .gtoreq.1 aryl group and .gtoreq.1 N atom which is not a heteroatom. These compds. are useful not only for effectively rendering dyes lightfast but also for using as an additive that has high soly. in solvents and sufficiently good miscibility with dyes to insure that their soly. will not be impaired. They can be used for preventing various reactions that cause deterioration by light in org. dyes, in particular cyanine dyes. They can also be used for improving the keeping quality and recording and reprodn. characteristics of optical recording media that use org. dyes in the form of thin films. Representative examples include N,N-lower alkyl substituted nitrosoanilines, phenol or naphthol derivs. having .gtoreq.1 nitroso group, nitrosodiphenylamine and its derivs. and 1-picryl-2,2-diarylhydrazyl free radicals.

ST stabilizer photog image nitroso compd

IT Photographic stabilizers

(for images, nitroso compds. as)

IT 104-91-6, 4-Nitrosophenol 120-22-9 131-91-9, 1-Nitroso-2-naphthol  
132-53-6 138-89-6, N,N-Dimethyl-p-nitrosoaniline 156-10-5,  
4-Nitrosodiphenylamine 1707-75-1 3590-52-1, N,N-Bis(2-hydroxyethyl)-p-nitrosoaniline 5905-68-0 7696-63-1 7696-64-2 7696-65-3 7696-66-4  
7696-67-5 7696-69-7 \*\*\*7696-70-0\*\*\* 7696-72-2 7696-73-3  
7703-61-9 16761-04-9 29785-93-1 40568-69-2 59973-84-1,  
6-Nitroso-o-cresol 65882-00-0 66266-79-3 98490-65-4 100316-72-1  
100658-35-3 135125-04-1 135238-70-9 135238-71-0 135238-72-1  
135238-73-2 135238-74-3 135238-75-4 135238-76-5 135238-77-6  
135238-78-7 135238-79-8 135238-80-1 135238-81-2 135238-82-3  
135238-83-4 135238-84-5 135238-85-6 135238-86-7 135238-87-8  
135238-88-9 135238-89-0 135238-90-3 135238-91-4 135238-92-5

RL: USES (Uses)

(photog. light stabilizer)

L5 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1967:54763 CAPLUS

DN 66:54763

ED Entered STN: 12 May 1984

TI p-Nitrosophenol chemistry. II. Amination of p-nitrosophenol ethers with primary aromatic amines

AU Hays, John T.; Young, Herbert Lewis; Espy, Herbert H.

CS Hercules Res. Center, Wilmington, DE, USA

SO Journal of Organic Chemistry (1967), 32(1), 158-62

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

CC 22 (Physical Organic Chemistry)

OS CASREACT 66:54763  
 GI For diagram(s), see printed CA Issue.  
 AB cf. preceding abstr. The reaction of alkyl ethers of p-ONC6H4OH with primary aromatic amines gives p-nitrosodiphenylamines (I) in high yields under mild conditions. This reaction is an example of an acid-catalyzed aromatic nucleophilic displacement in which the protonated nitroso group exerts a strong activating effect. Redn. or reductive alkylation of the p-nitrosodiphenylamine product provides a simple and unique route to p-aminodiphenylamine and its derivs., currently of com. importance as antiozonants for rubber. 17 references.

ST NITROSO DIPHENYLAMINES; DIPHENYLAMINES NITROSO; ETHERS AMINATION  
 NITROSOPHENOL; AMINATION NITROSOPHENOL ETHERS; NITROSOPHENOL ETHERS  
 AMINATION; AROM NUCLEOPHILIC DISPLACEMENT; NUCLEOPHILIC DISPLACEMENT AROM;  
 AROM AMINATION NITROSOPHENOL ETHERS

IT Phenols, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkyl p-nitrosophenyl, with anilines)

IT 156-10-5P 7696-63-1P 7696-64-2P 7696-65-3P 7696-66-4P 7696-67-5P  
 7696-68-6P 7696-69-7P \*\*\*7696-70-0P\*\*\* 7696-71-1P 7696-72-2P  
 7696-73-3P 7703-61-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and spectrum (uv) of)

IT 62-53-3, Aniline  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with alkyl p-nitrosophenyl ethers)

IT 1516-21-8 3420-97-1 7696-62-0  
 RL: PRP (Properties)  
 (reaction with anilines)

=> d his

(FILE 'HOME' ENTERED AT 12:16:24 ON 27 JUN 2005)

FILE 'STNGUIDE' ENTERED AT 12:16:30 ON 27 JUN 2005

FILE 'HOME' ENTERED AT 12:16:34 ON 27 JUN 2005

FILE 'CAPLUS' ENTERED AT 12:16:39 ON 27 JUN 2005

L1 1 S EP 1092753/PN

FILE 'REGISTRY' ENTERED AT 12:17:11 ON 27 JUN 2005

FILE 'CAPLUS' ENTERED AT 12:17:22 ON 27 JUN 2005

L2 TRA L1 1- RN : 11 TERMS

FILE 'REGISTRY' ENTERED AT 12:17:22 ON 27 JUN 2005

L3 11 SEA L2

FILE 'CAPLUS' ENTERED AT 12:17:31 ON 27 JUN 2005

L4 32 S L3

L5 31 S L4 NOT L1

=> log y

|  |            |         |
|--|------------|---------|
| COST IN U.S. DOLLARS                       | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| FULL ESTIMATED COST                        | 92.97      | 107.60  |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| CA SUBSCRIBER PRICE                        | -22.63     | -22.63  |

STN INTERNATIONAL LOGOFF AT 12:18:46 ON 27 JUN 2005

| Ref # | Hits | Search Query  | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|---|---|------------------|---------|------------------|
| L1    | 25   | ep-889363-\$.did. or ep-860821-\$.did. or ep-591820-\$.did. or ep-403797-\$.did. or jp-10071766-\$.did. or jp-10249315-\$.did. or jp-10134413-\$.did. or jp-08318674-\$.did. or jp-05085057-\$.did. or jp-04175188-\$.did. or jp-04185381-\$.did. or jp-03150189-\$.did. or jp-03142281-\$.did. | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:46 |
| L2    | 1    | ((assymetr\$6 or different) with substituent\$1) same (cyanine)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:48 |
| L3    | 3    | ((assymetr\$6 or different) same substituent\$1) same (cyanine or polymethine)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:49 |
| L4    | 3    | ((assymetr\$6 or asymetr\$6 or different) same substituent\$1) same (cyanine or polymethine)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:50 |
| L5    | 275  | ((assymetr\$6 or asymetr\$6 or different) same substituent\$1) same (cyanine or polymethine)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 13:01 |
| L6    | 1925 | (indole\$6 or benzoindol\$6) same (cyanine or polymethine)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:52 |
| L7    | 25   | I5 same (soluble or solubilit\$4 or dissolv\$6)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:53 |
| L8    | 38   | I5 same I6  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/06/27 12:53 |

|     |      |   |   |    |    |                  |
|-----|------|---|---|----|----|------------------|
| L9  | 62   | I7 or I8  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/27 12:53 |
| L10 | 38   | I9 and @ad<"19990427"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/27 12:54 |
| L11 | 4022 | (430/945 or 430/270.21 or<br>430/270.18 or 428/64.6 or<br>369/288).ccs. | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/27 13:03 |
| L12 | 30   | I5 and I11  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/06/27 13:04 |

\$%^STN;HighlightOn= \*\*\*;HighlightOff=\*\*\* ;

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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|--------------|----|--------|--|
| NEWS         | 1  |        | Web Page URLs for STN Seminar Schedule - N. America  |
| NEWS         | 2  |        | "Ask CAS" for self-help around the clock   |
| NEWS         | 3  | FEB 28 | PATDPAFULL - New display fields provide for legal status data from INPADOC   |
| NEWS         | 4  | FEB 28 | BABS - Current-awareness alerts (SDIs) available   |
| NEWS         | 5  | MAR 02 | GBFULL: New full-text patent database on STN   |
| NEWS         | 6  | MAR 03 | REGISTRY/ZREGISTRY - Sequence annotations enhanced   |
| NEWS         | 7  | MAR 03 | MEDLINE file segment of TOXCENTER reloaded   |
| NEWS         | 8  | MAR 22 | KOREAPAT now updated monthly; patent information enhanced  |
| NEWS         | 9  | MAR 22 | Original IDE display format returns to REGISTRY/ZREGISTRY  |
| NEWS         | 10 | MAR 22 | PATDPASPC - New patent database available  |
| NEWS         | 11 | MAR 22 | REGISTRY/ZREGISTRY enhanced with experimental property tags  |
| NEWS         | 12 | APR 04 | EPFULL enhanced with additional patent information and new fields  |
| NEWS         | 13 | APR 04 | EMBASE - Database reloaded and enhanced  |
| NEWS         | 14 | APR 18 | New CAS Information Use Policies available online  |
| NEWS         | 15 | APR 25 | Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAPLUS and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications. |
| NEWS         | 16 | APR 28 | Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS   |
| NEWS         | 17 | MAY 23 | GBFULL enhanced with patent drawing images   |
| NEWS         | 18 | MAY 23 | REGISTRY has been enhanced with source information from CHEMCATS   |
| NEWS         | 19 | JUN 06 | STN Patent Forums to be held in June 2005  |
| NEWS         | 20 | JUN 06 | The Analysis Edition of STN Express with Discover! (Version 8.0 for Windows) now available   |
| NEWS         | 21 | JUN 13 | RUSSIAPAT: New full-text patent database on STN  |
| NEWS         | 22 | JUN 13 | FRFULL enhanced with patent drawing images   |
| NEWS         | 23 | JUN 20 | MEDICONF to be removed from STN  |
| NEWS         | 24 | JUN 27 | MARPAT displays enhanced with expanded G-group definitions and text labels   |
| NEWS EXPRESS |    |        | JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005   |
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FILE 'HOME' ENTERED AT 17:24:40 ON 27 JUN 2005

=> file caplus

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |

FULL ESTIMATED COST

|      |      |
|------|------|
| 0.21 | 0.21 |
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=> s ep 1092753/pn

L1 1 EP 1092753/PN  
(EP1092753/PN)

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| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |

FULL ESTIMATED COST

|      |      |
|------|------|
| 2.34 | 2.55 |
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\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
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\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more

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<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> tra rn 11
L2.      TRANSFER L1 1- RN :      11 TERMS
L3      11 L2

=> s l3 and methoxyethoxy
      36841 METHOXYETHOXY
L4      0 L3 AND METHOXYETHOXY

=> s l3 and (ni or nickel)
      342893 NI
      135 NIS
      343026 NI
      (NI OR NIS)
      318578 NICKEL
L5      0 L3 AND (NI OR NICKEL)

=> d scan l3 1-11
'1-11' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
```

```
L3  11 ANSWERS  REGISTRY  COPYRIGHT 2005 ACS on STN
IN  1H-Benz[e]indolium, 1,1,2,3-tetramethyl-, salt with 4-
    methylbenzenesulfonic acid (1:1) (9CI)
MF  C16 H18 N . C7 H7 O3 S

    CM  1
```

/ Structure 1 in file .gra /

```
CM  2
```

/ Structure 2 in file .gra /

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

```
REG      - RN
SAM      - Index Name, MF, and structure - no RN
FIDE     - All substance data, except sequence data
IDE      - FIDE, but only 50 names
SQIDE    - IDE, plus sequence data
SQIDE3   - Same as SQIDE, but 3-letter amino acid codes are used
SQD      - Protein sequence data, includes RN
SQD3     - Same as SQD, but 3-letter amino acid codes are used
SQN      - Protein sequence name information, includes RN

CALC     - Table of calculated properties
EPROP    - Table of experimental properties
PROP     - EPROP and CALC
```

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

```
ABS  -- Abstract
APPS -- Application and Priority Information
BIB  -- CA Accession Number, plus Bibliographic Data
CAN  -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND  -- Index Data
```

IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN 1H-Benz[e]indolium, 2-[4-(acetylphenylamino)-1,3-butadienyl]-3-ethyl-1,1-dimethyl-, hexafluorophosphate(1-) (9CI)  
MF C28 H29 N2 O . F6 P  
  
CM 1

/ Structure 3 in file .gra /

CM 2

/ Structure 4 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN 1H-Benz[e]indolium, 2-[5-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)-3-chloro-1,3-pentadienyl]-1,1,3-trimethyl-, (OC-6-11)-hexafluoroantimonate(1-) (9CI)  
MF C38 H40 Cl N2 . F6 Sb  
  
CM 1

/ Structure 5 in file .gra /

CM 2

/ Structure 6 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):  
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN 1H-Benz[e]indolium, 2-[5-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-2-ylidene)-3-methyl-1,3-pentadienyl]-1,1,3-trimethyl-, hexafluorophosphate(1-) (9CI)

MF C39 H43 N2 . F6 P

CM 1

/ Structure 7 in file .gra /

CM 2

/ Structure 8 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN 1H-Benz[e]indolium, 2-[5-(1,3-dihydro-1,1-dimethyl-3-octyl-2H-benz[e]indol-2-ylidene)-1,3-pentadienyl]-1,1,3-trimethyl-, hexafluorophosphate(1-)  
(9CI)

MF C42 H49 N2 . F6 P

CM 1

/ Structure 9 in file .gra /

CM 2

/ Structure 10 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN 1H-Benz[e]indolium, 3-butyl-1,1,2-trimethyl-, salt with  
4-methylbenzenesulfonic acid (1:1) (9CI)

MF C19 H24 N . C7 H7 O3 S

CM 1

/ Structure 11 in file .gra /

CM 2

/ Structure 12 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN 1,4-Benzenediamine, N,N-dimethyl-N'-(4-nitrosophenyl)- (9CI)

MF C14 H15 N3 O

/ Structure 13 in file .gra /

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN 1H-Benz[e]indolium, 2-[5-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-

2-ylidene)-3-chloro-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-,  
(OC-6-11)-hexafluoroantimonate(1-) (9CI)  
MF C39 H42 Cl N2 . F6 Sb

CM 1

/ Structure 14 in file .gra /

CM 2

/ Structure 15 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN 1H-Benz[e]indolium, 2-[5-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-  
2-ylidene)-3-chloro-1,3-pentadienyl]-1,1,3-trimethyl-,  
hexafluorophosphate(1-) (9CI)  
MF C38 H40 Cl N2 . F6 P

CM 1

/ Structure 16 in file .gra /

CM 2

/ Structure 17 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN 1H-Benz[e]indolium, 2-[5-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-  
2-ylidene)-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-, hexafluorophosphate(1-)  
(9CI)  
MF C39 H43 N2 . F6 P

CM 1

/ Structure 18 in file .gra /

CM 2

/ Structure 19 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 11 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN 1H-Benz[e]indolium, 2-[5-(3-butyl-1,3-dihydro-1,1-dimethyl-2H-benz[e]indol-  
2-ylidene)-1,3-pentadienyl]-1,1,3-trimethyl-, hexafluorophosphate(1-)  
(9CI)  
MF C38 H41 N2 . F6 P

CM 1

/ Structure 20 in file .gra /

CM 2

/ Structure 21 in file .gra /

ALL ANSWERS HAVE BEEN SCANNED

=> 1  
1 IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s methoxyethoxy and nickel  
36841 METHOXYETHOXY  
318578 NICKEL  
L6 81 METHOXYETHOXY AND NICKEL

=> s l6 and cloro  
7 CLORO  
L7 0 L6 AND CLORO

=> s l6 and chloro  
3932176 CHLORO  
46 CHLOROS  
3932176 CHLORO  
(CHLORO OR CHLOROS)  
L8 7 L6 AND CHLORO

=> s l8 and methoxy  
4031041 METHOXY  
L9 7 L8 AND METHOXY

=> d scan

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN \*\*\*3H-Indolium, 2-[7-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-\*\*\*  
\*\*\* 1,3,5-heptatrienyl]-1,3,3-trimethyl-, (SP-4-1)-bis[1-(2-chlorophenyl)-2-[3-\*\*\*  
\*\*\* methoxy-4-(2-methoxyethoxy)phenyl]-1,2-ethenedithiolato(2-)-\*\*\*  
\*\*\* S,S']nickelate(1-) (9CI)\*\*\*  
MF C36 H34 Cl2 Ni O6 S4 . C29 H33 N2  
  
CM 1

/ Structure 22 in file .gra /

/ Structure 23 in file .gra /

CM 2

/ Structure 24 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN  
IN \*\*\*Nickel, bis[1-(2-chlorophenyl)-2-[3-methoxy-4-(2-\*\*\*  
\*\*\* methoxyethoxy)phenyl]-1,2-ethenedithiolato(2-)-.kappa.S,.kappa.S']-\*\*\*  
\*\*\* (9CI)\*\*\*  
MF C36 H34 Cl2 Ni O6 S4

/ Structure 25 in file .gra /

/ Structure 26 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN \*\*\*2-Propenylidium, 3-[3-[3,3-bis[4-(dimethylamino)phenyl]-2-\*\*\*  
\*\*\* propenylidene]-2-chloro-1-cyclohexen-1-yl]-1,1-bis[4-\*\*\*  
\*\*\* (dimethylamino)phenyl]-, (SP-4-1)-bis[1-(2-chlorophenyl)-2-[3-methoxy-4-(2-\*\*\*  
\*\*\* methoxyethoxy)phenyl]-1,2-ethenedithiolato(2-)-\*\*\*  
\*\*\* .kappa.S,.kappa.S']nickelate(1-) (9CI)\*\*\*  
MF C44 H50 Cl N4 . C36 H34 Cl2 Ni O6 S4

CM 1

/ Structure 27 in file .gra /

/ Structure 28 in file .gra /

CM 2

/ Structure 29 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN \*\*\*1-Butanaminium, N,N,N-tributyl-, (SP-4-1)-bis[1-(2-chlorophenyl)-2-[3-\*\*\*  
\*\*\* methoxy-4-(2-methoxyethoxy)phenyl]-1,2-ethenedithiolato(2-)-\*\*\*  
\*\*\* S,S']nickelate(1-) (9CI)\*\*\*  
MF C36 H34 Cl2 Ni O6 S4 . C16 H36 N

CM 1

/ Structure 30 in file .gra /

/ Structure 31 in file .gra /

CM 2

/ Structure 32 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN \*\*\*Nickel, bis[1-(2-chlorophenyl)-2-[3-methoxy-4-(2-\*\*\*  
\*\*\* methoxyethoxy)phenyl]-1,2-ethenedithiolato(2-)-S,S']-, (SP-4-1)- (9CI)\*\*\*  
MF C36 H34 Cl2 Ni O6 S4

/ Structure 33 in file .gra /

/ Structure 34 in file .gra /

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN \*\*\*Nickel(1+), [9,10-diethyl-20,21-bis[2-[2-(2-\*\*\*  
\*\*\* methoxyethoxy)ethoxy]ethoxy]-4,15-dimethyl-8,11-imino-3,6:16,13-dinitrilo-\*\*\*  
\*\*\* 1,18-benzodiazacycloeicosine-5,14-dipropanolato-\*\*\*  
\*\*\* .kappa.N1,.kappa.N18,.kappa.N23,.kappa.N24,.kappa.N25]-, nitrate, compd.\*\*\*

\*\*\* with dichloromethane (1:1) (9CI)\*\*\*  
MF C36 H42 N5 Ni O4 . C H2 Cl2 . N O3

CM 1

/ Structure 35 in file .gra /

CM 2

CM 3

/ Structure 36 in file .gra /

/ Structure 37 in file .gra /

CM 4

/ Structure 38 in file .gra /

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 7 ANSWERS REGISTRY COPYRIGHT 2005 ACS on STN

IN \*\*\*Nickelate(1-), bis[1-(2-chlorophenyl)-2-[3-methoxy-4-(2-\*\*\*  
\*\*\* methoxyethoxy)phenyl]-1,2-ethenedithiolato(2-)-.kappa.S,.kappa.S']-,\*\*\*  
\*\*\* (SP-4-1)- (9CI)\*\*\*  
MF C36 H34 Cl2 Ni O6 S4  
CI CCS, COM

/ Structure 39 in file .gra /

/ Structure 40 in file .gra /

ALL ANSWERS HAVE BEEN SCANNED

=> s nkx and 1199  
113 NKX  
2503 1199  
L10 1 NKX AND 1199

=> d all

L10 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 139562-87-1 REGISTRY

ED Entered STN: 13 Mar 1992

CN Nickel, bis[1-(2-chlorophenyl)-2-[3-methoxy-4-(2-methoxyethoxy)phenyl]-1,2-  
ethenedithiolato(2-)-.kappa.S,.kappa.S']- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Nickel, bis[1-(2-chlorophenyl)-2-[3-methoxy-4-(2-methoxyethoxy)phenyl]-1,2-  
ethenedithiolato(2-)-S,S']-

OTHER NAMES:

CN \*\*\*NKX 1199\*\*\*

MF C36 H34 Cl2 Ni O6 S4

SR CA

LC STN Files: CA, CAPLUS, CHEMLIST, USPAT2, USPATFULL

DT.CA Caplus document type: Journal; Patent



RL.P Roles from patents: PREP (Preparation); USES (Uses)

RL.NP Roles from non-patents: USES (Uses)

#### Ring System Data

| Elemental<br>Analysis<br>EA | Elemental<br>Sequence<br>ES | Size of<br>the Rings<br>SZ | Ring System<br>Formula<br>RF | Ring<br>Identifier<br>RID | RID<br>Occurrence<br>Count |
|-----------------------------|-----------------------------|----------------------------|------------------------------|---------------------------|----------------------------|
| =====                       | =====                       | =====                      | =====                        | =====                     | =====                      |
| C6                          | C6                          | 6                          | C6                           | 46.150.18                 | 4                          |
| C2NiS2-C2NiS2               | NiSC2S-NiSC2S               | 5-5                        | C4NiS4                       | 284.377.3                 | 1                          |

/ Structure 41 in file .gra /

/ Structure 42 in file .gra /

20 REFERENCES IN FILE CA (1907 TO DATE)

20 REFERENCES IN FILE CAPLUS (1907 TO DATE)

#### REFERENCE 1

AN 142:248675 CA  
TI Near infrared ray absorption composition and near infrared ray absorption filter  
IN Kuwabara, Shin  
PA Japan  
SO U.S. Pat. Appl. Publ., 26 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM G02B005-22  
NCL 252587000  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 41, 74  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE  
-----  
PI US 2005035336 A1 20050217 US 2004-883920 20040706  
JP 2005054031 A2 20050303 JP 2003-285287 20030801  
PRAI JP 2003-285287 20030801  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Near-IR-absorbing compns. are described which comprise a transparent resin; .gtoreq.1 dithiol nickel compd. described by the general formula I (R1-6 = independently selected H or C1-8 alkyl groups); and/or .gtoreq.1 diimmonium compd. described by the general formula II (R7-14 = independently selected H, C1-8 alkyl, or C6-24 aryl groups). IR filters employing the materials are also described. It is indicated that the filters are particularly suited for plasma display panels.  
ST dithiol nickel diimmonium near IR absorbing compn  
IT Polyvinyl butyrals  
RL: DEV (Device component use); USES (Uses)  
(6000C; near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)  
IT Optical materials  
(IR absorbers; near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)  
IT IR materials  
(absorbers; near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)  
IT Polycarbonates, uses  
RL: DEV (Device component use); USES (Uses)

(near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)

IT Optical filters  
(near-IR; near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)

IT 498-66-8D, Norbornene, deriv., polymer  
RL: DEV (Device component use); USES (Uses)  
(Arton; near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)

IT 536741-75-0, CIR 1085  
RL: DEV (Device component use); USES (Uses)  
(CIR 1085; near-IR-absorbing compns. and near-IR filters using them)

IT 28984-20-5, MIR 101 105892-90-8 139562-87-1 193157-64-1  
RL: DEV (Device component use); USES (Uses)  
(near-IR-absorbing compns. and near-IR filters using them)

IT 159520-52-2, Vylon 270 639469-50-4, Panlite L 1250Z100 825626-42-4, Halshybrid IR-G 204  
RL: DEV (Device component use); USES (Uses)  
(near-IR-absorbing compns. contg. dithiol nickel compds. and/or diimmonium compds. and near-IR filters using them)

#### REFERENCE 2

AN 141:96355 CA  
TI IR blocking film and IR blocking structure  
IN Sato, Hideyuki  
PA Tokai Rubber Industries, Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G02B005-22  
ICS B32B007-02; G02B005-26; G02B005-28  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

#### FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2004184844  | A2   | 20040702 | JP 2002-353868  | 20021205 |
| PRAI | JP 2002-353868 |      | 20021205 |                 |          |

AB The invention relates to an IR blocking film, suited for use in house windows, comprising a metal and/or metal oxide reflective layer formed on one surface of a film, an adhesive layer formed on the reflective layer, and an IR absorbing layer formed on the back surface of the film, wherein the reflective layer is positioned closer to the IR source than the IR absorbing layer.

ST IR blocking film window

IT Optical materials  
(IR absorbers; IR blocking film)

IT Windows  
(IR blocking film)

IT Polyesters, uses  
RL: DEV (Device component use); USES (Uses)  
(IR blocking film)

IT IR materials  
(absorbers; IR blocking film)

IT 139562-87-1, NKX-1199  
RL: DEV (Device component use); USES (Uses)  
(IR absorbing agent; IR blocking film)

IT 25038-59-9, Polyethylene terephthalate, uses  
RL: DEV (Device component use); USES (Uses)  
(IR blocking film)

IT 7440-22-4, Silver, uses 13463-67-7, Titanium oxide, uses  
RL: DEV (Device component use); USES (Uses)  
(reflective layer; IR blocking film)

#### REFERENCE 3

AN 140:102127 CA  
TI Near infrared-absorbing and antireflective films for plasma display panels  
IN Yamamoto, Tomohisa

PA Tomoegawa Paper Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G02B005-22  
 ICS B32B007-02; B32B027-18; G02B001-10; G02B001-11  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | JP 2004012592   | A2   | 20040115 | JP 2002-162952  | 20020604 |
| PRAI | JP 2002-162952  |      | 20020604 |                 |          |
| AB   | The films comprise transparent substrates and near IR absorber-contg. high-refractive-index layers coated with low-refractive-index surface layers. The films show high light transmittance by prevention of contact of the IR absorbers with adhesives.  |      |          |                 |          |
| ST   | IR absorbing antireflective film plasma display; transparency IR absorbing antireflective film display  |      |          |                 |          |
| IT   | Polyesters, uses<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(A 4300, substrates; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)   |      |          |                 |          |
| IT   | Optical materials<br>(IR absorbers, near-; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)  |      |          |                 |          |
| IT   | IR materials<br>(absorbers, near-; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)  |      |          |                 |          |
| IT   | Polyurethanes, preparation<br>RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)<br>(acrylic, high-refractive-index layers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)  |      |          |                 |          |
| IT   | Epoxy resins, uses<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(high-refractive-index layers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)   |      |          |                 |          |
| IT   | Antireflective films<br>Electromagnetic shields<br>Plasma display panels<br>(near IR-absorbing and antireflective films with high light transmittance for plasma display panels)  |      |          |                 |          |
| IT   | 25038-59-9, A 4300, uses<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(A 4300, substrates; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)   |      |          |                 |          |
| IT   | 253598-98-0P<br>RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)<br>(high-refractive-index layers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)   |      |          |                 |          |
| IT   | 644977-51-5, Adeka Optomer KRX 559-7 644977-52-6, DeSolute KZ 7987<br>RL: TEM (Technical or engineered material use); USES (Uses)<br>(high-refractive-index layers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)   |      |          |                 |          |
| IT   | 28984-20-5, MIR 101 139562-87-1, NKX 1199 644977-53-7, YKR 2200<br>644977-55-9, TX-EX 906B 644977-63-9, MIR 379<br>RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)<br>(near IR absorbers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels) |      |          |                 |          |
| IT   | 502423-81-6, ADK-ARKLS TY 100<br>RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)<br>(neon light absorbers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)  |      |          |                 |          |
| IT   | 7631-86-9D, Silica, fluorine derivs. 222726-35-4, LR 201<br>RL: TEM (Technical or engineered material use); USES (Uses)   |      |          |                 |          |

(surface layers; near IR-absorbing and antireflective films with high light transmittance for plasma display panels)

REFERENCE 4

AN. 137:187168 CA  
TI Radiation-curable and light-resistant resin compositions for inks having near-IR absorption and fluorescence properties  
IN Kitayama, Yasuyuki; Kiyoyagi, Noriko  
PA Nippon Kayaku Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08F002-44  
ICS C08F002-46; C08F290-06; C08F299-02; C09D011-10; C09K003-00; C09K015-32  
CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74  
FAN. CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2002241414 | A2   | 20020828 | JP 2001-38124   | 20010215 |
| PRAI | JP 2001-38124 |      | 20010215 |                 |          |

AB The title compns. comprise: (A) a resin contg. ethylene unsatd. substituents, e.g., (meth)acrylate oligomer having mol. wt. >1000, (B) a compd. absorbing near-IR wavelength 600-1000 nm, e.g., an arom. ammonium hexafluorophosphate, and (C) a light-resistance improver, e.g., sulfur-contg. arom. copper complex quaternary ammonium salts.  
ST acrylate methacrylate oligomer radiation curable ink compn; arom ammonium hexafluorophosphate near IR absorption ink compn; copper complex light resistance improver fluorescence ink compn  
IT Aromatic hydrocarbons, uses  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(N-contg., near-IR absorber; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT Quaternary ammonium compounds, uses  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(complexes, light-resistance improver; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT Inks  
(fluorescent; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT Fluorescent substances  
Light-resistant materials  
(inks; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT Inks  
(light-resistant; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT Inks  
(printing, radiation-curable; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT 28984-20-5P 117697-22-0P 139562-87-1P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(light-resistance improver; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT 354540-12-8P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(near-IR absorber; radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)  
IT 947-19-3, Irgacure 184  
RL: CAT (Catalyst use); USES (Uses)  
(radiation-curable and light-resistant resin compns. for inks having

near-IR absorption and fluorescence properties)  
 IT 450408-44-3P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (radiation-curable and light-resistant resin compns. for inks having near-IR absorption and fluorescence properties)

REFERENCE 5

AN 137:85757 CA  
 TI Near infrared absorption material  
 IN Kuwabara, Shin  
 PA Nisshinbo Industries, Inc., Japan  
 SO Eur. Pat. Appl., 22 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G02B005-22  
 ICS G02B001-04; C09B057-10  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 41, 74

FAN.CNT 1

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---|------|----------|-----------------|----------|
| PI   | EP 1221627  | A2   | 20020710 | EP 2001-130657  | 20011221 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |      |          |                 |          |
|      | JP 2002200711   | A2   | 20020716 | JP 2000-400914  | 20001228 |
|      | JP 3517210  | B2   | 20040412 |                 |          |
|      | CA 2366339  | AA   | 20020628 | CA 2001-2366339 | 20011227 |
|      | US 2002127395   | A1   | 20020912 | US 2001-26906   | 20011227 |
|      | US 6775059  | B2   | 20040810 |                 |          |
| PRAI | JP 2000-400914  |      | 20001228 |                 |          |

AB Near-IR absorbing materials are described which comprise a transparent substrate on which is formed at least a transparent resin layer which contains a near-IR absorbing dye and a dye which selectively absorbs light in the 550-620 nm region. Near-IR absorbing materials are also described which comprise a transparent substrate on which is formed at least a transparent resin layer which contains a near-IR absorbing dye and an adhesive layer contg. a dye which selectively absorbs light in the 550-620 nm region, both formed on the transparent substrate so that the adhesive layer becomes the outermost layer. Filters for plasma display panels formed from the near-IR absorbing materials are also described.

ST plasma display panel filter near IR absorbing material

IT Optical materials

(IR absorbers; near-IR absorbing materials and filters for plasma display panels using them)

IT IR materials

(absorbers; near-IR absorbing materials and filters for plasma display panels using them)

IT Polyesters, uses

RL: DEV (Device component use); USES (Uses)

(arom.; near-IR absorbing materials and filters for plasma display panels using them)

IT Dyes

Optical filters

(near-IR absorbing materials and filters for plasma display panels using them)

IT Polycarbonates, uses

Polyesters, uses

Polyesters, uses

Polyolefins

RL: DEV (Device component use); USES (Uses)

(near-IR absorbing materials and filters for plasma display panels using them)

IT Optical filters

(near-IR; near-IR absorbing materials and filters for plasma display panels using them)

IT 5496-71-9 24968-11-4, Polyethylene naphthalate 25038-59-9,

Polyethylene terephthalate, uses 25230-87-9 139562-87-1 428829-37-2  
440355-72-6 440355-74-8  
RL: DEV (Device component use); USES (Uses)  
(near-IR absorbing materials and filters for plasma display panels  
using them)

REFERENCE 6

AN 136:303049 CA  
TI Method of forming electrode section on inner surface of transparent  
electromagnetic wave shielding plate  
IN Tone, Masahi; Hasegawa, Shun; Masuda, Gen; Hasegawa, Yasushi; Hasegawa,  
Yatsuhiko; Hasegawa, Shigekazu  
PA Nisshinbo Industries, Inc., Japan; Hasegawa Chemical Industry Co., Ltd.  
SO Eur. Pat. Appl., 18 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM H05K009-00  
ICS G12B017-02; B29C070-88; B32B031-16; B32B015-08; B32B007-12  
CC 77-8 (Magnetic Phenomena)  
Section cross-reference(s): 38

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE     |
|------|--|------|----------|------------------|----------|
| PI   | EP 1196018   | A1   | 20020410 | EP 2001-122671   | 20010928 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |      |          |                  |          |
|      | JP 2002116700  | A2   | 20020419 | JP 2000-306553   | 20001005 |
|      | TW 521562  | B    | 20030221 | TW 2001-90124275 | 20011002 |
|      | US 2002042162  | A1   | 20020411 | US 2001-971123   | 20011005 |
|      | US 6686536   | B2   | 20040203 |                  |          |
| PRAI | JP 2000-306553   |      | 20001005 |                  |          |

AB This invention provides a method of forming an electrode section on the  
inner surface of the transparent, electromagnetic wave shielding plate,  
composed of a transparent substrate coated, at least on 1 side, with an  
electroconductive member and transparent film in this order, which are  
laminated into a monolithic structure via a heat-bond film, comprising:  
(a) laminating the components of the transparent, electromagnetic wave  
shielding plate by hot pressing into the monolithic structure, after  
replacing the perimeter or part of the heat-bond film corresponding to the  
electrode section by a frame member almost as thick as the heat-bond film,  
(b) removing the frame member and part of the outer transparent film, both  
corresponding to the electrode section, or only the outer transparent film  
for the part corresponding to the electrode section, and (c) exposing the  
electroconductive section of the electroconductive member to the surface  
layer section by the above steps (a) and (b). This invention also  
provides the transparent, electromagnetic wave shielding plate and  
electromagnetic wave shielding front plate for PDP's produced by the same  
method.

ST transparent electromagnetic wave shielding plate electrode section; plasma  
display panel fabrication

IT Polyesters, uses  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)

(A 4300 film; method of forming electrode section on inner surface of  
transparent electromagnetic wave shielding plate)

IT Plate glass  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)

(HS-LEX; method of forming electrode section on inner surface of  
transparent electromagnetic wave shielding plate)

IT Films  
(elec. conductive; method of forming electrode section on inner surface  
of transparent electromagnetic wave shielding plate)

IT Electric conductors  
(films; method of forming electrode section on inner surface of  
transparent electromagnetic wave shielding plate)

IT Sintering  
(hot pressing; method of forming electrode section on inner surface of  
transparent electromagnetic wave shielding plate)

IT Adhesives  
 (layer; method of forming electrode section on inner surface of transparent electromagnetic wave shielding plate)

IT Antireflective films  
 Coloring materials  
 Electromagnetic shields  
 Etching  
 Glass substrates  
 Lamination  
 Multilayers  
 Plasma display panels  
 Sputtering  
 Transparent films  
 (method of forming electrode section on inner surface of transparent electromagnetic wave shielding plate)

IT 25038-59-9, PET, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (A 4300 film; method of forming electrode section on inner surface of transparent electromagnetic wave shielding plate)

IT 1314-13-2, Zinc oxide, processes 7440-22-4, Silver, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (ZnO/Ag/ZnO/Ag lamination by sputtering; method of forming electrode section on inner surface of transparent electromagnetic wave shielding plate)

IT 5496-71-9, IRG 022 17354-14-2 28984-20-5, MIR 101 61951-89-1, C.I. Solvent Violet 36 86297-84-9, L-1250Z 139562-87-1, NKX 1199 408494-9 2-8, 2201UV 408494-95-1, Elphan OH 501 408495-00-1, MT 3-135sss  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (method of forming electrode section on inner surface of transparent electromagnetic wave shielding plate)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

- (1) Dubrow, R; US 4900877 A 1990
- (2) Fujitsu General Ltd; EP 0910107 A 1999
- (3) Lang, C; US 5250342 A 1993
- (4) Lintec Corp; EP 0944299 A 1999
- (5) Sumitomo Chemical Co; EP 0977167 A 2000

REFERENCE 7

AN 131:191926 CA  
 TI Optical read/write recoding medium having cyanine organic dyes  
 IN Nagano, Hideki; Nagataki, Yoshiyuki; Ohara, Hiroshi; Iuchi, Shinichiro  
 PA Hitachi Maxell, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41M005-26

ICS C09B023-00; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 11227331   | A2   | 19990824 | JP 1998-29986   | 19980212 |
| PRAI | JP 1998-29986 |      | 19980212 |                 |          |
| GI   |               |      |          |                 |          |

/ Structure 43 in file .gra /

AB The optical read/write recoding medium has a recording layer having cyanine org. dyes on a substrate, wherein the cyanines org. dye have structures I(Y = benzene ring; Z= naphthalene ring; R1-6 = H, alkyl, alkoxy, alkyl hydroxy, etc.) and II(Z= naphthalene ring; R1-6 = H, alkyl, alkoxy, alkyl hydroxy, etc.), wherein the recording layer contains

.ltoreq.30% of the cyanine org. dye II. The optical recording medium provides a wide bit pattern and wide laser power margin and shows the excellent light-resistance and the long shelf-life.

ST optical read write recoding medium cyanine org dye

IT Optical recording materials

(optical read/write recoding medium having cyanines org. dye)

IT 7696-70-0 88358-74-1 121458-91-1 139562-87-1 162023-06-5

240122-19-4 240122-21-8

RL: TEM (Technical or engineered material use); USES (Uses)

(cyanines org. dye for optical read/write recoding medium)

#### REFERENCE 8

AN 131:163459 CA

TI Multicolor filter and materials for its preparation

IN Furukawa, Tadahiro; Murai, Tatsuhiko; Takahashi, Atsushi

PA Kyodo Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B005-20

ICS C09B011-00; C09D007-12; C09D011-00; G02F001-1335; G03F007-004

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 11223720   | A2   | 19990817 | JP 1998-39634   | 19980204 |
| PRAI | JP 1998-39634 |      | 19980204 |                 |          |

AB A multicolor filter for use in a light-transmitting liq.-crystal display device comprises green triphenylmethane dyes and metal complexes for improved lightfastness of the dye patterns, wherein the metal complexes comprise a metal selected from nickel, copper, and cobalt and a ligand selected from dialkyl phosphates, dialkyl dithiocarbonates, and benzenedithiols.

ST multicolor filter triphenylmethane green dye display; liq crystal display triphenylmethane multicolor filter; metal complex triphenylmethane multicolor filter display

IT Liquid crystal displays

(multicolor filters contg. green triphenylmethane dyes and metal complexes for)

IT Optical filters

(multicolor; contg. green triphenylmethane dyes and metal complexes for liq.-crystal display devices)

IT 2650-18-2, Acid Blue 9 3520-42-1, Acid Red 52 5601-29-6, Solvent Yellow 21 6483-73-4, Acid Blue 103 10343-55-2, Solvent Yellow 19 12217-38-8, C.I. Acid Yellow 61 12220-64-3, Acid Yellow 19 12239-15-5, C.I. Acid Yellow 49 12239-75-7, Solvent Yellow 83 17372-87-1, Acid Red 87 18472-87-2, Acid Red 92 61116-27-6, C.I. Solvent Yellow 63 73384-78-8, Acid Yellow 127

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(liq.-crystal display devices with multicolor filters contg. metal complexes and)

IT 94140-35-9, PA-1005 97428-30-3, PA-1006 139562-87-1, NKX1199

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(liq.-crystal display devices with multicolor filters contg. triphenylmethane dyes and)

#### REFERENCE 9

AN 129:223328 CA

TI Optical recording material

IN Kanno, Toshiyuki

PA Fuji Electric Co., Ltd., Japan

SO Eur. Pat. Appl., 29 pp.

CODEN: EPXXDW

DT Patent



LA English  
IC ICM G11B007-24  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | EP 860821  | A2   | 19980826 | EP 1998-103148  | 19980223 |
|      | EP 860821  | A3   | 19990929 |                 |          |
|      | EP 860821  | B1   | 20021127 |                 |          |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO |      |          |                 |          |
|      | JP 10291373  | A2   | 19981104 | JP 1998-42243   | 19980224 |
|      | JP 10337959  | A2   | 19981222 | JP 1998-42244   | 19980224 |
| PRAI | JP 1997-39472  |      | 19970224 |                 |          |
|      | JP 1997-91982  |      | 19970410 |                 |          |

GI

/ Structure 44 in file .gra /

AB An optical recording material comprises, on a substrate having light transmission properties, an org. thin-film recording layer contg. a cyanine dye represented by the general formula I wherein R1 and R2 represent a C3-18 substituent having an unsatd. bond or one of them represents a C3-18 substituent having an unsatd. bond and the other represents an alkyl group, an aryl group, or an alkoxy group and (Y1)n and (Y2)m represent structures which are asym. to each other in the cyanine dye mol. and n and m represent an integer of 1 to 4 as a main component and a metal reflection layer and a protective layer is further provided thereon.

ST optical recording material cyanine dye

IT Optical recording materials

(contg. cyanine dye layers)

IT 4182-80-3, 1,4-Benzenediamine, N,N,N',N'-tetrakis[4-(dibutylamino)phenyl]-  
RL: TEM (Technical or engineered material use); USES (Uses)

(NIR-AM 1; optical recording materials contg. cyanine dye layers and)

IT 139562-87-1, NKX 1199

RL: TEM (Technical or engineered material use); USES (Uses)

(NKX 1199; optical recording materials contg. cyanine dye layers and)

IT 7696-70-0, NKX 1549

RL: TEM (Technical or engineered material use); USES (Uses)

(NKX 1549; optical recording materials contg. cyanine dye layers and)

IT 212140-46-0 212140-48-2 212140-50-6 212140-52-8 212140-54-0

212140-56-2 212140-58-4 212140-60-8 212140-62-0 212140-66-4

212140-68-6 212140-70-0 212140-72-2 212140-74-4 212141-00-9

RL: TEM (Technical or engineered material use); USES (Uses)

(optical recording materials contg.)

IT 117526-80-4D, anionic metal complexes, ammonium salts

RL: TEM (Technical or engineered material use); USES (Uses)

(optical recording materials contg. cyanine dye layers and)

IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-22-4, Silver,  
uses 7440-32-6, Titanium, uses 7440-50-8, Copper, uses 7440-57-5,  
Gold, uses 11106-92-6

RL: TEM (Technical or engineered material use); USES (Uses)

(reflection layers for optical recording materials contg. cyanine dye  
layers)

#### REFERENCE 10

AN 129:47445 CA

TI Write-once optical disk having light-resistant and storage-stable organic  
dye layer

IN Nagano, Hideki; Nagataki, Yoshiyuki

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G11B007-24

ICS B41M005-26; C09B057-00  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 10134413    | A2   | 19980522 | JP 1996-304096  | 19961030 |
| PRAI | JP 1996-304096 |      | 19961030 |                 |          |
| GI   |                |      |          |                 |          |

o

/ Structure 45 in file .gra /

AB The disk has a recording layer contg. an org. dye, a nitrosodiphenylamine  
deriv., preferably NO-1,4-C6H4-NHC6H4R2 (R2 = alkyl, anil (sic),  
dialkylamino, H, halo) and a bisphenyldithiol complex, preferably I (R1 =  
alkyl, anil, dialkylamino, H, halo; M = transition metal). The added  
compds. improves light resistance of cyanine-based org. dyes in the disk.  
ST write once optical disk light resistance; nitrosodiphenylamine optical  
disk cyanine dye; bisphenyl dithiol optical disk cyanine dye  
IT Optical disks  
(write-once optical disk contg. nitrosodiphenylamine and  
bisphenyldithiol showing improved light resistance and storage  
stability)  
IT 139562-87-1  
RL: DEV (Device component use); USES (Uses)  
(write-once optical disk contg. nitrosodiphenylamine and  
bisphenyldithiol showing improved light resistance and storage  
stability)  
IT 7696-70-0 138248-60-9  
RL: DEV (Device component use); MOA (Modifier or additive use); USES  
(Uses)  
(write-once optical disk contg. nitrosodiphenylamine and  
bisphenyldithiol showing improved light resistance and storage  
stability)

=> d his

(FILE 'HOME' ENTERED AT 17:24:40 ON 27 JUN 2005)  
FILE 'CAPLUS' ENTERED AT 17:24:45 ON 27 JUN 2005  
L1 1 S EP 1092753/PN  
FILE 'REGISTRY' ENTERED AT 17:25:11 ON 27 JUN 2005  
FILE 'CAPLUS' ENTERED AT 17:25:20 ON 27 JUN 2005  
L2 TRA L1 1- RN : 11 TERMS  
FILE 'REGISTRY' ENTERED AT 17:25:20 ON 27 JUN 2005  
L3 11 SEA L2  
L4 0 S L3 AND METHOXYETHOXY  
L5 0 S L3 AND (NI OR NICKEL)  
L6 81 S METHOXYETHOXY AND NICKEL  
L7 0 S L6 AND CLORO  
L8 7 S L6 AND CHLORO  
L9 7 S L8 AND METHOXY  
L10 1 S NKX AND 1199

=> log y

|  |            |         |
|--|------------|---------|
| COST IN U.S. DOLLARS                       | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| FULL ESTIMATED COST                        | 54.49      | 68.42   |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL   |
|  | ENTRY      | SESSION |
| CA SUBSCRIBER PRICE                        | -0.68      | -0.68   |

STN INTERNATIONAL LOGOFF AT 17:29:50 ON 27 JUN 2005

|            |   |    |            |
|------------|---|----|------------|
| <u>L10</u> | NKx near2 1199  | 25 | <u>L10</u> |
| <u>L9</u>  | "NKx-1199"  | 25 | <u>L9</u>  |
| <u>L8</u>  | (methoxyethoxy near8 chloro) same (dithiol\$5 or bisdithiol\$6 or bisphenyldithiol\$6 or dithiolbenzyl) | 4  | <u>L8</u>  |
| <u>L7</u>  | (methoxyethoxy near8 chloro) same (dithiol\$5 or bisdithiol\$6 or bisphenyldithiol\$6)                  | 4  | <u>L7</u>  |
| <u>L6</u>  | L5 or l2  | 38 | <u>L6</u>  |
| <u>L5</u>  | L4 and @ad<19990427   | 32 | <u>L5</u>  |
| <u>L4</u>  | (methoxyethoxy near15 (ni or nickel))   | 58 | <u>L4</u>  |
| <u>L3</u>  | (methoxyethoxy near8 (ni or nickel))  | 20 | <u>L3</u>  |
| <u>L2</u>  | L1 and @ad<19990427   | 6  | <u>L2</u>  |
| <u>L1</u>  | nkx-1199  | 25 | <u>L1</u>  |

END OF SEARCH HISTORY